```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-434-837-10_COPY_1_1801
1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           November 23, 2003, 20:47:41; Search time 6644.53 Seconds (without alignments) 11088.547 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2888711 segs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 atgtcagcttcacctctcct.....ctatgagtcgcaggatccga 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gb ba:
gb intg:
gb om:
gb om:
gb om:
gb opat:
gb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                          em_sts:*
em_vi:*
em_vi:*
em_htg_inv:*
em_htg_orher:*
em_htg_mus:*
em_htg_mus:*
em_htg_pln:*
em_htg_pln:*
em_htg_pam:*
em_htg_mam:*
em_htg_wxt:*
em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em mu:
em ow:
em ov:
em ov:
em ov:
em pat:
em ph:
em ph:
*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_fun:*
em_hum:*
em_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5777422
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result

	O		O			ი	Ω	ი	a			ი																																! -
4 4 4 0			41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	5	14	۳ <u>ا</u>				9	œ	7	0	σ	4.	ω	N	Ц	No.
41.4	41.4	41.4	41.4		42.4	4		43.6		œ	٠	Ñ	4.	65			21.	21.	21.	21.		42	54.	58	58.	64	762.8	81		67.	σ,	7	60	160	۵	<u>ဒ</u>	05		σ	765.	65.	1765.2	ď	Score
22.	2.3	٠		2.3	2.4	2.4	2.4	2.4	2.6		٠		3.6					٠	٠		ა	'n	4.	4.	9		42.4		_	-	- :	י ס	9	. م	٩	9	9	7	8	œ	98.0		œ	Match
υO	360	2632	6328	27	502	541	0051	50	2000	0	5	334108	61		759	112	12	112	112	27	27	79	93	67	5	99	3385	957	496	546	10200	466	JΠ	96	w	993	47	9	414	459	24595	459	45	Length
NN	N	ر ا	N	_	9	w	_	9	σ	σ	8	_	μ	۲	<u>, , , , , , , , , , , , , , , , , , , </u>	o	σ	0	_	σ	თ	۲	<u>, , , , , , , , , , , , , , , , , , , </u>	_	_	_	. مر	_	_	۳	ь,	<b>-</b> 1	<b></b>	<b></b> -	44	در	_	_	_	σ	δ	σ	1	BG
AC103202 AC131820	N	16	4149	UORF	AF429315	0679	0167	293	55	539	11862	8	RH2710	ATU16787	208	v.	70	AR050120	_	124442	AR050109	PSU04358	×	PSEIAAMH	IS4AAHM		AF061780	AF126447	AVU83986	AVU83987	ATTAIAAH	AB025110	2375	_,	0941	AE007927	26	PMS2	242	054	40	BD016312		ID
AC103202 Rattus no AC131820 Rattus no	1721 Rat	98160 Rattus	141497 Rattı	0490 Ac	29315 Homo	067936 C	16775 Pseudo	315 Homo sa	55393 Sequenc	5393 Sequenc	18627	1685	271050	787 Agrobact	P002086 Agrobac	453 Seguence 1	770 Sequence	50120 Sequenc	03313 Integrate	442 Seguence	50109 Sequence	4358 Pseudomon	3867 Pantoea ag	1035 P.syringāe	609 Plasmid p	61151 Agrobacter	F061780 Agrobac	F126447 Agrobact	3986	3987 Agrobacter	185 A.tumefaci	025110 Agrobact	J237588 AG	F126446 Agrobact	E009419 Agrobact	007927 Agrobact	016260 A	02554 Ti plasmid	F242881 Agrobact	546 DNA	00404 Ti plasmid	BD016312 Method of	0493 Agrobacter	Description

## ALIGNMENTS

REFERENCE AUTHORS TITLE	ORGANISM	SOURCE	VERSION KEYWORDS	ACCESSION	DEFINITION	LOCUS	ATACH5	RESULT 1
<pre>1 (bases 1 to 24595) Barker.R.F., Idler,K.B., Thompson,D.V. and Kemp,J.D. Nucleotide sequence of the T-DNA region from the Agrobacterium</pre>	Agyobacterium tumefaciens Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Rhizobium/Agyobacterium group; Agyobacterium.	unidentified reading frame. Agrobacterium tumefaciens (Rhizobium radiobacter)	<pre>x00493.1 GI:39062 octopine synthetase; plasmid; synthetase; terminal repeat;</pre>	X00493 J05108 X00282	Agrobacterium tumefaciens Ti plasmid pTi15955 T-DNA region.	ATACH5 24595 bp DNA linear BCT 10-FEB-1999		

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                   SdO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      conflict
                                                                                                                                                                                              conflict
                                                                                                                                                                                                                                                           conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Guevara-Garcia,A., Mosqueda-Cano,G., Arguello-Astorga,G., Simpson,J. and Herrera-Estrella,L.
Tissue-specific and wound-inducible pattern of expression of the mannopine synthase promoter is determined by the interaction between positive and negative cis-regulatory elements plant J. 4 (3), 495-505 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumefaciens octopine Ti plasmid pT115955

plant Mol. Biol. 2, 335-350 (1983)

2 (bases 602 to 14237)

Gielen, J., De Beuckeleer, M., Seurinck, J., Deboeck, F., De Greve, H.,

Lemmers, M., Van Montagu, M. and Schell, J.

The complete nucleotide sequence of the TL-DNA of the Agrobacterium

The complete nucleotide sequence of the TL-DNA of the Agrobacterium

tumefaciens plasmid pT1Ach5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 (bases 1 to 24595)
Turk, S.C., Nester, E.W.
The vira promoter is a.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mol. Microbiol. 7 (5), 719-724 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8469115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBO J. 3 (4), 835-846 (1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 24595)
                                                                                                                                                                                                                                                                           /tränslation="MCFFACILPNFFLPQPHSLFCYSFGIGWDGGDNCASVGNAVIES
LLCIPSHFLKRAINVQQRYIEYIKGYICWVWAARNFARALDHFVFSWINGNISINDEI
YPRALRSYETSLCRTAISILCVN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RYAQQRFYDGVSDGGAVISTVPPYAEGITKQTMRLWQKKVWQNTSKETHDLDAYIALL
PNLRFKIQISHI"
/codon_start=1
/transT_table=11
/protein_id="CAR25165.1"
/db_xref="GI:39065"
/db_xref="SWISS-PROT:P03867"
                                                                                                                               complement (2907. .3287)
                                                                                                                                                                                                                                                                                                                                                              /trans\(\bar{1}\) table=11
/protein_id="CAA25164.1"
/db_xref="GI:39064"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (1736.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="SWISS-PROT:P04028"
/translation="MYDGQPIFNIIDSSNLQDRRELKLVLIHTENAYRSSAQRSLIAS
QRSWINFIINTDVPIDPAKDEVVKCSRKVACCPDPTDIPFDILNVSLLYVYCSFQEMR
                                                                                                                                                    /citation=
                                                                                                                                                                                                                                     /note="C is T in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /transT_table=11
/protein_id="CAA25163.1"
/db_xref="GI:39063"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1661. .2179
/note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="T-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /plasmid="Ti"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Agrobacterium tumefaciens"
/mol_type="genomic DNA"
/db_xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                           note="open reading frame
                                                                                                                                                                        note="T is CG in [2]"
                                                                                                                                                                                                                citation=[2]
                                                                                                                                                                                                                                                                                                                                            db_xref="SPTREMBL:Q44387"
                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="C is T in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="direct repeat A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Hooykaas, P.J. host-range determinant in
                                                                                                                                                                                                                                     [2] "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 2113)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Agrobacterium
                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sgo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sdo
                                                                                                                                                                                                                      conflict
                                                                                                                                                                                                                                                                                 conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           conflict
    /trans]_table=11
/protein_id="CAA25169.1"
/db_xref="G1:39069"
/db_xref="SPTREMBL:Q44390"
/translation="MLFNMIGLQTRMPGELSNSTGVVRIFILKNFSFKHWTRLMIPEF
                                                                                                                                                                                                                                                                                                                      /db_xref="Sptrembl:Q44389"
/translation="mkQfVCHHESGNASANDRHFRLRNILRKEADPSTIGTLVKKRSV
VVEQVDCWKGTCRTLQHQVSTISYHVKWHGPFKGYGKPGNAFHRAILVQRHWQGSKAG
                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/transl_table=11
/protein_id="CAA25168.1"
/db_xref="GI:39068"
                                                                                       codon_start=1/transl_table=
                                                                                                                                                                          /note="T is C in {2}"
/citation=[2]
                                                                                                                                                                                                                                   citation=[2]
                                                                                                                                                                                                                                                           note="TC
                                                                                                                                   'note="open reading frame
                                                                                                                                                                        citation=
```

겭 ij

[2] "

```
/db xref="sptrembl: Q44388"

//db xref="sptrembl: Q44388"

//translation="msasphidnocohiptkmydltmydkadeidrrvsdafileskpw
//translation="msasphidnocrepisaggkyavisayiyigkeiigrileskpw
RGRRITQISTECSAGLACKRLADGRFPEISAGGKVAVLSAYIYIGKEILGRILESKPW
RARTYGLISTECSAGLACKRLADGRFPEISAGGKVAVLSAYIYIGKEILGRILESKPW
RARTYGLISTECVAGFTITLEGAVPFDMVAYGRNLMLKGSAGSFPTIDLLYDYRPFF
LPMPLYENGTMKCVTGFTITLEGAVPFDMVAYGRNLMLKGSAGSFPTIDLLYDYRPFF
LPMPLYENGTKKVAVIGAGISGLVVANELLHAGVDDVTIYBASDRVGGKL
WSHAFAGALPFKLPHRYVNGWRAFIKAGFTFLERYGLSSMRPFPNGTTUDTYLVYQGVQ
YMWKAGQLPFKLPHRYVNGWRAFIKAGFHERDIVLASSWRPFPNGTUDTYLVYQGVQ
YMWKAGQLPFKLPHRYVNGWRAFIKAGFHERDIVLASSWRPFRNGIGSGGFQPVFESGFI
IMLNRFGRESFSSGIERIFLGTHPPGGETWSFPHDWLFKLMGIGSGGFQPVFESGFI
EILBLUVINGYSENGRAFKLMSTANIGLHCLTCOTNIFOAPVNQAVDNSHWTGSSKLFLM
TERKFWLDHILPSCVLMDGIAKAVYCLDYESQDPNGKGLVLISYTWEDDSHKLLAVPD
KKERLCLLEDAISRSFPAFACHLFPACADYDQNVIQHWLTDENAGGAFKLMRRGEDF
KKERLCLLEDAISRSFPAFACHEFPACADYDQNVIQHWLTDENAGGAFKLMRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EANIPHLDELNKGASFPVALYEFPHALKQYLDDFVKTVSFSDVIKGIRSPDVANIANA
QIDGHQISKAEYELARHSFRPRLQATYRNYFKLNRLDAILFPTAPLVARPIGQDSSVI
HNGTMLDTFKIYVRNVDPSSNAGLPGLSIPVCLTPDRLPVGMEIDGLADSDQRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="mvaitslagslehlkrkdysclelvetliarceaakslnallat dwdglarsakkiibrhokipski psrv dwdglarsakkiibrhokafvglogiplofkaniarqwppdlipggssggvaaavas aerlesagalpasgmhelsegitsnnyafgavrnpwppdlipggssggvaaavas lmlggidfgasvrlpaalcgvaprptlgkyegdriipvspyrdtpgiiaqcvadv vildriisgtperippvelkglriglpttyfyddldadvalaaettirllakkgvtfv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5809. .8076
/note="open reading
                                                complement (6259.
                                                                                         PLEHSWKRYNYRTRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /trans| table=11
/protein_id="CAA25167.1"
/db_xref="GI:39067"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GALEEAIGFRYFAGLPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (4060. .5463)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              translation="mnfadTplasLDLDWACEEFIKTYGASPQLETGEVIQTNNGLLY/
tygKGSLSQRIHDTHLKFKEKEELSFTTIKPAEMKAQQSDLTYYVAIFQSNYFLCVSN
/note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /transl_table=11
/protein_id="CAA25166.1"
/db_xref="GI:39066"
/db_xref="SWISS-pROT:P03868"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEKGFLRCHNRPFLYPIVAHGSMS"
                                                                                                                              /SEELFFQALDTANDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="T is C in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="AA is A in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="open reading frame 4 gene tms"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is TCG in [2]"
                                                    .6579)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              v
                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene tms"
```

```
음 성 음 성 음 성 음
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                             ঠ
              S
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                 Query Match 98.0
Best Local Similarity 99.0
Matches 1792; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conflict
                                                                                                                                                                                                         5929
6169
                                                                                                     6049
                      361
                                                                          301
             GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                              CCTTGGGCGCGAACAGTGAGTGGTTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                      CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                           CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                             GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                         CGAGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /citation=[2]
9926. .9927
/note="TT is T in [
/citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation=WDLHLIFGPTCTGKTTTAIALAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVEELKCTTLYLDDRPVGGIIAAKQAHRLIESVYNHEANGGLILEGGSTSL
LNCWARNSYNSADFRWHIIRHKLPDGETFWAAKARVKQMLHPAAGHSIIQELVYLW
EPRLRPILKEIDGYRYAMLFASQNQITADMLLQLDANMEGKLINGIAQEYFIHARQQE
                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/trans1_table=11
/protein_id="CAA25171.1"
/protein_id="CAA25171.1"
/db_xref="GI:39071"
/db_xref="SWISS-PROT:B04030"
/translation="MDRMSMARQGWLVPCLSHGKDDQLQGELSELSKVYREKFQTDLH
/translation="MDRMSMARQGWLVPCLSHGKDDQLQGELSELSKVYREKFQTDLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QKFPQVNAAAFDGFEGHPFGMY"
9564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /citation=[2]
8771 . 9493
/note="open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TWRVAVVPSQVDGWRVLFRPRVTPSVQLSTIVEAFWQRAILSNTLGRDITTALEISLW
ILLQVLQVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9996. .10571
/note="open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/transl_table=11
/protein_id="CAA25170.1"
/db_xref="GI:39070"
/db_xref="SWISS-PROT:P03869"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="T is C in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="CG is
/citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="A is G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /citation=[2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="T is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="A is
                                                                                                                                                                                                                                                                                                                                                                             98.0%;
                                                                                                                                                                                                                                                                                                                                                               9: Score 1765.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ဂ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [2] "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [2] "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [2] "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [2] "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                            24595;
                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                            5928
                        420
                                                  6168
                                                                                                     6108
                                                                                                                               300
                                                                                                                                                        6048
                                                                                                                                                                                                         5988
                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                              5868
                                                                           360
                                                                                                                                                                                 240
                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                 2
                               Ś
                                                            밁
                                                                               S
                                                                                                         В
                                                                                                                                   Ş
                                                                                                                                                                  밁
                                                                                                                                                                                     Ş
                                                                                                                                                                                                                В
                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
            밁
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                  7128
                                                                                                                                                                                                                       7009
                                                                                                                                                                                                                                                                         6949
                                                                                                                                                                                                                                                                                                1141
                                                                                                                                                                                                                                                                                                                                                                             6829
                                                                                                                                                                                                                                                                                                                                                                                                                                6769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6289
                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                    GAGTCCTTCTCTAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                           TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                              TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                               GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                   ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                         TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                      TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                           GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                          CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCGAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                  GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
              TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                               TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                     ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC
                                                                                                                                                                                                                                                                                                                            GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                               ន់
                                     1499
                                                                                                                                                                                                                                                                                                                                                   1140
                                                                                         1439
                                                                                                                  7187
                                                                                                                                                                      7127
                                                                                                                                                                                                                       7068
                                                                                                                                                                                                                                                1259
                                                                                                                                                                                                                                                                          7008
                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                            6948
                                                                                                                                                                                                                                                                                                                                                                               6888
                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                                                                                                                                                                                                                                                                                                                                                                                   6828
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6348
                                                               7247
                                                                                                                                                                                             1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
```

tch al similar: 1792; Conn 1792; Conn                 809 ATGTCAA 61 CTGACAJ 61 CTGACAJ	PF 22-NOV-2000 JP 2000356816 PR 18-NOV-1983 US 553786 PR 18-NOV-1983 US 553786 PI RICHARD F BARKER, JOHN D KEMP PC C12N15/09, A01H5/00,C12N5/10,C12N5/00,C12N5/00 CC Method of promoting plant transcription by using octopine T- CC DNA promoter  Location/Qualifiers PH Key	RESULT 2 BD016312 BD016312 LOCUS BD016312 DEFINITION Method of promoting plant transcription by using octopine T-DNA promoter: ACCESSION BD016312.1 GI:22557450 VERSION BD016312.1 GI:22557450 VERSION BD016312.1 GI:22557450 Agrobacterium tumefaciens (Rhizobium radiobacter) SOURCE ORGANISM Agrobacterium tumefaciens Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium. REFERENCE AUTHORS AUTHORS Barker, R. F. and Kemp, J.D. TITLE JOURNAL MYCOZEN PLANT SCIENCE INC COMMENT OS Agrobacterium tumefaciens PN JP 2001190289-A/1 PD 17-JHI-20019	Qy   1500 TCAGAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Oy 1021 CAGCTGCCA	Oy 781 GACGATGTT Db 6589 GACGATGTT OY 841 TTCAGGGAC OY 841 TTCAGGGAC OY 901 TTCTGCTTC OY 901 TTCTGCTTC OY 961 CCCGGCACP Db 6769 CCCGGCACP	Qy         481 CTGCCAATC	Oy 121 CGAGAAGCT
CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGT		CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC  [	CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180

5 밁

밁

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                     RESULT
E00404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         중 유
                                                                                                                                                                   COMMENT
                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                   w
NEON404.1 GI:2168687

E00404.1 GI:2168687

Agrobacterium tumefaciens (Rhizobium radiobacter)

Agrobacterium tumefaciens

Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiale
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacteriu

1 (bases 1 to 24595)

Selectrion Using Opine Synthase Gene
Patent: JP 1985156333-A 1 16-AUG-1985;
AGURIJIENETEIKUSU RES ASSOC LTD

OS Agrobacterium tumefaciens
PN JP 1985156333-A/1

PF 14-SEP-1983 US 83 532280

PF 14-SEP-1983 US 83 532280

PR 14-SEP-1983 US 83 532280

PR 14-SEP-1983 US 83 532280

PR RICHIVANDO EFU BEIKAA

PC A01H1/00,C12N5/00,C12N15/00,C12R1:91); CC

**source: strain=15955;
FH Key

FH Key

ECC topology: Linear;
CC **source: strain=15955;
FH Key
                                                                                                                                                                                                                                                                                                                                                                                                                                               7608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1260
                                                                                                                                                                                                                                                                                                                                                       E00404 2
Ti plasmid T-DNA region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                               g:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACCAATATTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGGTGGTGCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAAGGAAAAAAAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGTGGTTAACGGTGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAGAAAATCAGCGGATGTGCCCTGAAGGAAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                      24595
                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                     Agrobacterium
                                                                                                                                                                                                                                                                  Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                      PAT 29-SEP-1997
                                                              G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                           á
                                                                          밁
                                                                                                5
                                                                                                                                                        Ş
                                                                                                                                                                                           밁
                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 1792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                     6409
                                                                                                                                   6289
                                                                                                                                                                                             6229
                                                                                                                                                                                                                                                   6169
                                                                                                                                                                                                                                                                                                             6109
                                                                                                                                                                                                                                                                                                                                                                      6049
                                                                                                                                                                                                                                                                                                                                                                                                                              5989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5869
                                                                                                      541
                                                                                                                                                              481
                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                             CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                     CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                            CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACCTTGGACACCCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                     GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                    GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                             TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                     CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                           CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                              CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DS complement (12555. .13632)
/product='octopine synthase'
DS complement (19147. .20128)
/product='agropine synthase'
DS /product='agropine synthase'
/product='agropine synthase'
/product='agropine synthase'
Complement (22482. .23384)
/product='mannopine synthase'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ա
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Agrobacterium tumefaciens"
/mol type="genomic DNA"
/db xref="taxon:358"
5509 c 5793 g 6759 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .24595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note='ROTL(B)'
15900..15923
/note='ROTL(C)'
23759..23783
/note='ROTL(D)'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      909. .1032
/note='ROTL(A)'
14060. .14083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1765.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 24595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                     6468
                                                                                                                                   6348
                                                                                                                                                                                             6288
                                                                                                                                                                                                                                                      6228
                                                                                                                                                                                                                                                                                                              6168
                                                                                                                                                                                                                                                                                                                                                                      6108
                                                                                                                                                                                                                                                                                                                                                                                                                                6048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5868
                                                                             6408
                                                                                                        600
                                                                                                                                                                540
                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
```

2

Ó B 성 유

ঠ

S

S

S 밁 S

```
1380
                                                                                                                                                                                                                                                                                                                                                                                                                                    1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6589
                                                                                                                                                                                                                                                                                                                                                1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1081
    1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                        TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                           TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                               TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                      TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAGAAAATCAGCGGATGTGCCCCTGAAGGAATCTCAAGAACTTCCACGCCGGTCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGCTTGTTTTTCCTTCCAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                     GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                   TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                        TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                           TGAAGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
    1799
                                                                                       1739
                                                                                                                                                                                                                                                             1619
                                                                                                                                                                                                                                                                                                                                                                                                                                    1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6828
                                                                                                                                                                        1679
                                                                                                                                                                                                                                                                                                                                                   1559
                                                                                                                                                                                                                                                                                                                                                                                             7307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6528
                                                                                                                                  7487
                                                                                                                                                                                                                                                                                                        7367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                            7547
```

ঠ 밁 S 밁 Ś В ર્ g S 밁 S 밁 á 밁 र् В δ 밁

밁

S

밁

밁

8 8 8 8 8

밁

```
RESULT
E00546
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
S
             뭉
                        δ
                                       밁
                                                   á
                                                                 밁
                                                                            á
                                                                                                                                                      FEATURES
source
                                                                                                                            BASE COUNT
                                                                                           Matches 1792;
                                                                                                 Query Match
Best Local Similarity
                                       5869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7548
                                                                                                                                                                                                                                                                                                                                                                                                                                                      7608 GA 7609
                                                                  5809
                           121
                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                    CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
              CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                        CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                 Conservative
                                                                                                                           /organism="Agrobacterium tumefaciens"
/mol_type="genomic_DNA"
/db_xref="taxon:358"
5509 c 5793 g 6759 t
                                                                                                                                                       .24595
                                                                                                  98.0%;
99.4%;
                                                                                           0
                                                                                                  Score 1765.2;
Pred. No. 0;
                                                                                            Mismatches
                                                                                                        DB
                                                                                            8
                                                                                                        6.
                                                                                                        Length
                                                                                                          24595;
                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 29-SEP-1997
                                                                                            2
                                                                                            Gaps
                                                     120
                                         5928
                                                                  5868
               5988
                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7607
                                                                                                                                                                                                                                                                                    S
                                                                                             2
```

8	4g	B 8	B 8	유 성	g dy	B 8	B 8	B 8	유 성	8 8	B &	B 8	B 8	B 8	음 성	B 8	B 8	B
1260 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319	1201 GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 1259 	1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1200	1081 GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA 1140 	1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGT	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020	901 TICTGCTIGTTITICTICCTCGAGCGTTACGGCCIGTCTTCGATGAGGCCGTICCCAAAT 960 	841 TICAGGACGCICCTAGIGICGIGGCCGAAAIGGGGGCGAIGCGAI	781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840 	721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780	661 TGTTCCGATAGIGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	541 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	481 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	361 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420 	301 CCTTGGGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360	241 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300 	
JOURNAL Cell 47 (3), 471-477 (1986) MEDLINE 87028239		JOURNAL J. Bacteriol. 168 (1), 2 MEDLINE 87008387 PUBNED 3759904 PERFERENCE 1 /baces 168088 to 1730	REFERENCE 2 (bases 166443 to 169193) AUTHORS Yanofsky, M.F. and Nester, E.W. Molecular characterization of Arrobacterium tumefaciens		•	VERSION AF242881.1 GI:8572673 KEYWORDS Agrobacterium tumefaciens ORGANION Agrobacterium tumefaciens		RESULT 5 AF242881 LOCUS DEFINITION Agrobacterium tumefaciens oct	Db 7608 GA 7609	7548 TGT	7488	7428	5 6 6	7308		7188	71	Db 7069 ACATGGAGTTTTCCTCATGATTGGGAC

```
SATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                             GGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                   ATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                      SATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                      GATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                            CATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                        SATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                    ATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                          VAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                           \AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1559
                                                                                                                                                                                                                                                                               IGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                              1619
                            1799
  7607
                                                        7547
                                                                                  1739
                                                                                                               7487
                                                                                                                                         1679
                                                                                                                                                                    7427
                                                                                                                                                                                                                           7367
                                                                                                                                                                                                                                                                               7307
                                                                                                                                                                                                                                                                                                           1499
                                                                                                                                                                                                                                                                                                                                      7247
                                                                                                                                                                                                                                                                                                                                                                   1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                    7127
```

AF242881

Agrobacterium tumefaciens octopine-type Ti plasmid, complete sequence.

SION AF242881 AF034854 AF034855 AF035413 AF035773 AF039888 AF012881 AF034854 AF034855 AF035413 AF035773 AF039888 AF117204 AH006676 M14480 M14762 M80605 M80607 U19620 U43674 U43675 ON AF242881 I GI:8572673

ANDS Agrobacterium tumefaciens (Rhizobium radiobacter)

Agrobacterium tumefaciens Bacteria; Rhizobiales; Rhizobiacea; Rhizobiacearium group; Agrobacterium Rhizobiacearium group; Agrobacterium Rhizobiacearium group; Agrobacterium Bacteria; Proteobacterium group; Agrobacterium Bacteria; Proteobacterium group; Agrobacterium Rhizobiaceae; Rhizobiacearium group; Agrobacterium Barker, F., Idler, K.B., Thompson, D.V. and Kemp, J.D.

BARK Ucleotide sequence of the T-DNA region from the Agrobacterium Unsefaciens octopine Ti plasmid pTi15955

Plant Mol. Biol. 2, 335-350 (1983)

Plant Mol. Biol. 2, 335-350 (1983)

Vanofsky, M.F. and Nester, E.W.

Molecular characterization of a host-range-determining locus from Agrobacterium tumefaciens

Agrobacterium tumefaciens

NALL J. Bacteriol. 168 (1), 244-250 (1986)

NASS Yanofsky, M.F., Porter, S.G., Young, C., Albright, L.M., Gordon, M.P.

Agrobacterium tumefaciens encodes a

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                    JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                              JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
             JOURNAL
MEDLINE
                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
PUBMED
             octopine-type Mol. Microbiol 99141607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pTiR10
Mol. Mic:
96405643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fuqua, C. and Winans, S.C.
Localization of OccR-active
                 12 (bases 76455 to 98723)
Lyi,S.M., Jafri,S. and Winans,S.C.
Mannopinic acid and agropinic acid catabolism octopine-type Ti plasmid pTi15955
Mol. Microbiol. 31 (1), 339-347 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 (bases 68024 to 76460)

Kim,K.S. and Farrand,S.K.

Ti plasmid-encoded genes responsible for catabolism of gall opine mannopine by Agrobacterium tumefaciens are h gall opine mannopine by Tregion genes responsible for synthesis of this opine Tregion genes responsible for synthesis of this opine.
                                                                                                                                                                                                                                         Oger, P., Kim, K.S., Sackett, R.L., Piper, K.R. and Farrand, S.K. Octopine-type Ti plasmids code for a mannopine-inducible dominant-negative allele of traft, the quorum-sensing activat regulates Ti plasmid conjugal transfer Mol. Microbiol. 27 (2), 277-288 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                               9 (bases 22855 to 39243; 9)
Alt-Morbe,J., Stryker,J.L.,
Winans,S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 (bases 50125 to 54471)
Habeeb,L.F., Wang,L. and Winans,S.C.
Transcription of the octopine catabolism operon of Agrobacterium tumor-inducing plasmid pTiA6 is active.
                                                                                                                                                                     11 (bases 133963 to 138972)
Kalogeraki, V.S. and Winans, S.C.
Wound-released chemical signals may
                                                                                                                                                                                                                                                                                                                                                                   The conjugal transfer system of Agrobacterium tumefaciens octopine-type Ti plasmids is closely related to the transfer system of an IncP plasmid and distantly related to Ti plasmid vir genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                            880977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Localization of OccR-activated express two ABC-type permeases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plasmid pTiA6
J. Bacteriol. 173 (20), 6398-6405 (1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 (bases 50125 to 54471)
Valdivia,R.H., Wang,L. and Winans,S.C.
Characterization of a putative periplasmic octopine accumulation encoded by Agrobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysR-type regulatory protein Mol. Plant Microbe Interact. 4 (4),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pTiA6
Nucleic Acids Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3547330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Characterization
                                                                                                                                                                                                                                                                                                                  10 (bases 54312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1655707
                                                                                                                         Bacteriol, 180
                                                                                                                                                         Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                          Bacteriol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteriol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 175278 to 1
hans,S.C., Allenza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Microbiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                          178 (14), 4248-4257
                                                                                                                                                                                                                                                                                                                to 62806)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             enza,P., Stac
                                                                                                                           (21),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (11),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 (2),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (6), 1199-1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177719)
                                                                                                                            5660-5667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3275-3284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stachel
                                                                                                                                                                                                                                                                                                                                                                                                                           96353 to 111409)
., Fuqua,C., Li,P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  825-837 (1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chel, S.E., McBride, K.E. operon of the Agrobact
                                                                                                                                                       strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TraR-activated promoters that the traR gene of Ti plasmid
                                                                                                                                                                     elicit multiple responses
                                                                                                                                                       containing an octopine-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379-385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ride, K.E. and l
Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transport system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               activated
                                                       region
                                                                                                                                                                                                                                                                                                                                                                                                                                Farrand,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                       of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   f the crown homologs of opine by the
                                                                                                                                                                                                                                                                                                                                                                                                                                S.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nester,E.W.
n Ti plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               m for
Ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                         ij.
                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                           REFERENCE
                                         COMMENT
                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Octopine-type Ti
Unpublished
                                                                                                                                                                     Zhu, J. and Winans, S. Direct Submission
                                                                                                                                                                                   24 (bases 110822 to Zhu, J. and Winans, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Winans, S.C. and Lyi, S Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Winans, S.C.
Direct Submission
                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                             Urbana-Champaign,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Urbana-Champaign,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kim, K.-S
                                                                                                                                                                                                                                                                                      23 (bases 62801 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 (bases 96353 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61801,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 186239 to
                                                                                   Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhu,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                              361
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (25-NOV-1997) Section of Microbiology, Co University, Wing Hall, Ithaca, NY 14853, USA 21 (bases 133963 to 138972; 176911 to 186244) Styker,J.L., Mantis,N.J., Kalogeraki,V.S. and Winam. Direct Submission Submitted (23-DEC-1997) Microbiology, Cornell University 14853, USA 22 (bases 22855 to 39243) Winams,S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13 (bases 1 to Winans, S.C., Farrand, S.K.
Submitted (07-MAR-2000) Microbiology, Cornell University, Hall, Ithaca, NY 14853, USA on or before Jun 20, 2000 this sequence version replaced gi:3377769, gi:1215729, gi:1381799, gi:797330, gi:2665704, gi:2749889, gi:5738260, gi:2773254, gi:2773255, gi:2773256 gi:154827, gi:2662524, gi:39122, gi:2687604, gi
                                                                                                                                     Submitted (18-AUG-1999) Section of Nuniversity, Wing Hall, Ithaca, NY 10 University Wing Hall, Ithaca, NY 10 25 (bases 1 to 194140) Zhu,J., Oger,P.M., Schrammeijer,B., Winans,S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (20-NOV-1997) Microbiology, Hall, Ithaca, NY 1483, USA 20 (bases 170209 to 175283) Zhu,J. and Winans,S.C. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         715 Stadium Dr., San Antonio.
17 (bases 54312 to 62806)
17 (bases 54312 to and I
Kim,K.-S., Sackett,R.L. and I
Direct Submission
Submitted (04-JUN-1996) Crop
                                                                                                                                                                                                                                                                                                                                            Oger, P.M.
Direct Submission
Submitted (29-DEC-1998) Crop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhu, J. and Winans, S.C.
Direct Submission
Submitted (17.NOV-1997) Section
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (20-DEC-1995) Stephen C. Winans, University, Wing Hall, Ithaca, NY 14853, U. 16 (bases 39167 to 45466)
                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (03-AUG-1998) Hall, Ithaca, NY 14853,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (07-FEB-1996) Clay 715 Stadium Dr., San Antonio,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  University, Wing Hall, It
19 (bases 76455 to 98723)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Illinois at Urbana-Champaign,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 194140)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (10-JAN-1995) Kun-Soo Kim,
at Urbana-Champaign, 1201 W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plasmid
                                                                                                                                                                                                                                                                 133968)
1.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) 193239)
i.C.
                                                                                                                                                                                                                                                                                                                                                                                                             66985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oger, P.M.,
                                                                                                                                                                                                                                                                                                                           ERML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ERML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ithaca,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Microbiology, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Farrand, S
                                                                                                                                                                                                                                                                                                                           Sciences, University 1201, W. Gregory Dr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sciences, University
1201 W. Gregory Dr., U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fuqua, Biology,
, TX 78212, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   n of Microbiology,
NY 14853, USA
                                                                                                                                                                                                      n of Microbiology,
NY 14853, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schrammeijer, B., Hooykaas, P.J.
                                                                                                                                                                 Hooykaas, P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Microbiology, Gregory Dr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cornell University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cornell University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Microbiology,
  255, gi:2773256,
gi:2687604, gi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Trinity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     University,
                                                                                                                                                                                                                           Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y of Illinois at
Urbana, IL 61801,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cornell
                                                                                                                                                                                                                                                                                                                             of Illinois
Urbana, IL 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    University 
Urbana, IL
                                                                                                                                                                 Farrand, S.K.
    gi:154767,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wing
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wing
                                                                                                                                                                                                                                                                                                                                IL 61801,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                 and
```

γQ	유 성	D Q	g Q	용	B 6	B &	B &	유 성	B 6	g 99	D Q	Que Bes Mat		_		_	FEATURES SOU
661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	541 CTTGAAGGGCCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	481 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	361 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420	301 CCTTGGGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360	241 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300	181 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180	61 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120	1 ATGTCAGCTTCACCTCCTTGATAACCAGTGCGATCATCTCCCAACCAA	Query Match 98.0%; Score 1765.2; DB 1; Length 194140; Best Local Similarity 99.4%; Pred. No. 0; Matches 1792; Conservative 0; Mismatches 8; Indels 2; Gaps 2;	/insertion_seq="ybe" /note="similar to IS66"  source 1418314666 /organism="Agrobacterium tumefaciens"	source / Thereton Seq="ypd"  source 13636. 14181  /organism="Agrobacterium tumefaciens"  /mol_type="genomic DNA"  /db xref="taxon:358"	/organism="" /mol_type=" /db_xref="t	/pla /not octc	gi:154773, gi:6689862.  Location/Qualifiers  1194140  forganism="Agrobacterium tumefaciens"  /mol_type="genomic DNA"  /db xref="taxon:358"
₽ Q	, B &	B &	\$ B &	, B &	B &	B 8	B 6	₽ <b>₹</b>	B &	8 8	B &	\$ B &	B 8	B 8	B &	유 성	Db Db
1/40 TETECTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1/99	GICAMANCTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG	20 INCOMINITITICADUCACCACIMACCACICATION ACACCACIMITICACACIMITICACACIMITICACACIMITICACACIMITICACIMITICACIMITICACIMITICACIMITICACACIMITI	TAAGGITGTTGTTCACATCTGGACTCGCAAATATCCAACTCAGCATTGCCTGACATGCA	TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1		TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC	1320 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA 1379	ACATGGAGTTTTCCTCATGATTGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG	GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACAATCCTCCTGGTGGT-GAT-GAT-GAT-GAT-GAT-GAT-GAT-GAT-	CASSAKACAIIASSISSICICAISACICCISSICAMAIIIISSICISACICSIICSSASSICI 	OBJECT   CALCADE CONCATALISTS   INSCIT CONCENTATION CONTROL OF C	021 CAGC TGC CACCGANGC TG I CCAI CGCG I LACANGG I LOCUGIGG GCG I CI I GANGGAC	CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG	901 TICTGCITGTTITTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960 	841 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 900	781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	5562 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 5621 721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SEGMENT
SOURCE
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
TIPMS2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ક
                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
PUBMED
                                                                        Query Match
Best Local Similarity
Matches 1789; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plasmid T
Plasmid T
Plasmids.
   160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TIPMS2
Ti plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             original source text: Plasmid Ti (clone: pTiA6NC.).
Original source text: Plasmid Ti (clone: pTiA6NC.).
The tmm1 protein has a region which showed significant homology to the adenine binding regione of p-hydroxybenzoate hydroxylase from p. fluorescens. It seems that the tmm1 protein binds adenine eltner as substrate or cofactor.
The initiation and termination sites of transcription have not yet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klee, H., Montoya, A., Horodyski, F., Lichtenstein, C., Garfinkel Fuller, S., Flores, C., Peschon, J., Nester, E. and Gordon, M. Nucleotide sequence of the tms genes of the pTiASNC octopine plasmid: two gene products involved in plant tumorigenesis Proc. Natl. Acad. Sci. U.S.A. 81 (6), 1728-1732 (1984) 84170374
                                                                                                                                                 About
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K02554
of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ହ=ହ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 2591)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1801
                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               identified [1].
                                                                                                                                                                                               /COGOT_Start=1
//COGOT_Start=1
                                                                                                                                               54 a
250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                             PLEHSWKRYNYRTRN"
570 c 656
bp after segment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="tms1"
160. .2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /plasmid="Plasmid Ti"
160. .2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /specific host="octopine"
/db xref="taxon:2512"
/clone="pTiA6NC."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="tms1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Plasmid Ti"
mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:154747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Â.
                                                                                        97.7%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumefaciens
                                                                                                                                               segment
                                                                        Score 1760.4;
Pred. No. 0;
0; Mismatches
                                                                          <u>,</u>
                                                                                                                                                   656 g
gment 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                    711
                                                                                                                                                                    đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain)
                                                                                                           BB
                                                                          11;
                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tms1 gene,
                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Garfinkel, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BCT
                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-MAR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                      60
   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                yet
                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                     밁
                                             S
                                                                                         В
                                                                                                                      Ś
                                                                                                                                                                  밁
                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                              1021
                                                                                                                                                                    1120
                                                                                                                                                                                                                                             1060
                                                                                                                                                                                                                                                                                                                      1000
                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                          940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    340
                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
                                                                                         TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                         TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                            GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCTCCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                             GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                           CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                          TTCTGCTTGTTTTTCCTTCCAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                      GGTTTCTATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                    CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGAAGGGCCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATG
                                                                                                                                  1080
                                                                                                                                                                      1179
                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                             1119
                                                                                                                                                                                                                                                                                                                      1059
                        1299
                                                                                             1239
                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
```

Murata, K., Ti plasmid

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
AB016260
LOCUS
                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                  ERSION
                                                                                                                       JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                            AUTHORS
TITLE
                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1201
  plasmid
Nucleic
3
                                                                                                                                                            Genome structure of pTi-SAKURA (I):
a Japanese cherry-Ti plasmid
Nucleic Acids Symp. Ser. 37, 159-160
                                                                                                                                                                                                                                                                                                                                                                       AB016260 DNA cir
Agrobacterium tumefaciens plasmid pTi-SAKURA,
AB016260 AB007145 AB007188 AB006857 AB006858
AB016260.1 GI:6498173
                                                               Genome structure
                                                                                Hattori,Y.,
                                                                                                                                                                                                                                                                                                               Agrobacterium tumefaciens (Rhizobium radiobacter)
                                                                                                                            9586048
                                                                                                                                                                                                                                Hattori,Y.,
                                                                                                                                                                                                                                                                       Rhizobiaceae; Rhizobium/Agrobacterium
                                                                                                                                                                                                                                                                                           Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ဂ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAGAGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGAAATCAGCGGATGTGCCCTGAAGGAATTCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACACTCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                       pTi-SAKURA's
Acids Symp. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                     Suzuki,K., Ohta,N., Uraji,M., Katoh,A. and Yoshida,K. Cture of pTi-SAKURA (V): Complete nucleotide sequence-SAKURA's vir region in Agrobacterium tumefaciens ds Symp. Ser. 39, 265-266 (1998)
                                                                                                                                                                                                                                Suzuki, K., Uraji, M.,
                                                                                                                                                                     159-160 (1997)
                                                                                                                                                                                                                              Ohta, N.,
                                                                                                                                                                                                        strategy for D
                                                                                                                                                                                                                                                                     group; Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                         circular BCT 12-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                     complete sequence.
                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                and Yoshida,
                                                                                                                                                                                                          sequencing
                                                                                                                                                                                                    4, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1359
                                                               of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PUBMED
                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Faculty of Science; Kagamiyama 1-3-1, Higashihiroshima-shi, Hiroshima 739, Japan (E-mail:ksuzuki@ipc.hiroshima-u.ac.jp, Tel:0824-24-7456, Fax:0824-24-0733)
On or before May 14, 2001 this sequence version replaced gi:2982699, gi:29826703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Complete I
Gene 242
20184752
10721727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suzuki,K., Ohta,N., Hattori,Y., Uraji,M., Kato,A. and Yoshida,K. Novel structural difference between nopaline- and octopine-type trbJ genes: construction of genetic and physical map and sequencing of trb/tral and rep gene clusters of a new Ti plasmid pTi-SAKURA Biochim. Biophys. Acta 1396 (1), 1-7 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ohta, N., Suzuki, K., Hattori, Y., Uraji, M., Katoh, A. and Yoshida, K. Genome structure of pTi-SAKURA (III): Characteristics of T-DNA Nucleic Acids Symp. Ser. 39, 185-186 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Suzuki, K., Hattori, Y., Uraji, M., Kato, A. and Yoshida, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Suzuki, K. and Yoshida, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9524202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98193120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic Acids Symp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Uraji,M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to
                                                                                                                                                                                                                                                               /transT_table=11
/protein_id="BAA87820.1"
/db_xref="G1: 64.898.68"
/db_xref="G1: 64.898.68"
/translation="MOAVRTAVMNNRFNAIVERASAIVRTAHTTFVKIVODYQCAIA
/translation="MOAVRTAVMNNRFNAIVERASAIVRTAHTTFVKIVODYQCAIA
/translation="MOAVRTAVMNNRFNAIVERSAIVRTAHTTFVKIVODYQCAIA
/translation="MOAVRTAVMNNRFNAIVERCENTREPTDECUTHLMD
VTLLYPIFFDEKLIAIGMAFVHASDIGGANPGSISAPATEVFQEGENQDVIN
VAETYGARAVIRTIROGVYTFSDYLEGIHDGQLAYFSVTMTVKOSEIEUPFTGTDPQLA
AAYNLATGATTHPYIIQCLYAYILTVDPLTFRNSGILRAIGGHAPRGTVLNAVYFAAG
GSRAASATRAYDVILGCLNOALPEGLAAGGGNSGVIVVSADDBTRGBRRNVVGTID
GGGGARRGVDGLDGSEVRYSQRSVPVEVIEIETVLVMRALRLVPDSRRAGRFASGAAL
EIEMENTSNRAVITVRNINRFVFAPWGFKGEIGLLGKAVVNPCRPDERSVGKISVLE
LGQBDILRITSSTGGAFGEPLEEDVAAIREIENGMISPERAADVAVVFDRDSKIDE
AATAEHRTERANRKSDDFNFCIVRQRQDQVWSQQTRRELASRALIFEQRIRSQLVDRV
HHRLAKGERVDAGKLDQVIAEGARL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    structure of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acids Symp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleotide sequence (1-2), 331-336 (200)
/translation="msyqibics ircfvvaaeelhfrraairlnmsqptlsqqikrle
Elmgyqlfirstrydltragasffdhardilkidballnkleagglspggelii
Gaispatsqllplilsfrqqrfptriaiktydsiblirgibedfhydlmrppsnsu
Lyrfrhilserfvaymprqsalarkpalrlsdfaghgyfalkrfelscfftyyeqlsg
                                                                                                                                                                                                          complement (1559.
                                                                                                                                                                                                                            complement (1559.
/gene="tiorf1"
                                                                              /transl_table=11
/protein_id="BAA87626.1"
/db_xref="GI:6498174"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="hyuB gene homolog"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="tiorf195"
/note="h..."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /plasmid="pTi-SAKURA"
/note="collection_site:
join(205959...206479,1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Agrobacterium
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Suzuki, K.,
                                                                                                                                                                   note="Putative"
                                                                                                                                                                                  gene="tiorf1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="tiorf195"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="MAFF301001"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .206479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          206479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Ohta,N., Hattori,Y., Katoh,A. and Yoshida,K. pTi-SAKURA (IV): Characteristics of tra region Ser. 39, 187-188 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (2000)
                                                                                                                                                               transcriptional
                                                                                                                                                                                                          .2479)
                                                                                                                                                                                                                                                    .2479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Japan
. 1435)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ohta, N., Iwata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tumor-inducing
                                                                                                                                                                 regulatory
```

cherry tree) "

δ

S

밁

ર્

밁

á

밁 5

밁

B,

δ 8 δ 밁 S 밁 δ 밁 Ś 밁 ð 밁

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SdO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SdC
                                                                                                                           SdC
                                                                                                                                                                                                       /trans_table=11
/protein_id="BAAF7630.1"
/protein_id="BAAF7630.1"
/db_xref="G1:6498178"
/db_xref="G1:6498178"
/translation="MDATQPTLVAEDVHKNFGTLEVLKGISLTANKGDVVSIIGSSGS
/kranslation="MDATQPTLVAEDVHKNFGTLEVLLKGISLTANKGDVVSIIGSSGS
/kranslation="MDATQPTLVAEDVHKNFGTLEVLLKGISLKTANKGDVVSIIGSSGS
/kranslation="MDATQPTLVAEDVHKNFGTLEVLLKGISLKTANKGDVVSIIGSSGS
/kranslation="MDATQPTLVAEDVHKNFGTLEVLKVIINKLAAFYSQLSGGQQC
RVSIARALAMQPSALLFDEPTSALDPELVGEVLKVIRKLAEEGRTMVVVTHEMGFARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MDIQLIIESFPKLLAAVPTTLTLAFISLLIGFVVSVPVALMRLS KNRIVSSLAYGYVYIIRSTPLLVQMFLIYYGSAQFRGVLSEVGLMSSFREPWFCAILA LALNTAAYTSEIIRGGIQSVSLGQIEAARAVGMSTFLQFRRIVFFIAIRQALPAYGNE VMLIIKSTSLASTITIVEVTGLAKQIISATYSPVEVFIVAGAIYLFITFVVSRLVMLA EWWLNPHMRARVGGTAPKAAETH"
                                                                                                                         /gene="tiorf6"
6016. .6951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MKFFNLNALAAVVTGVLLAAGPTQAKDYKSITIATEGSYAPYNF
KDAGGKLIGFDIDLGKDLCKRWNIECKEVEQAWDGI ISSLTAGRYDAIWAAWGIQDAN
EKVLAFSRFYLLTEWTFLTTANSSFLLKTQVAIERIELAELDIDITTPEQKAELIAKETKIFEGE
KFGVQAGTSHEAFMKQMMPSVQISTYDTIDNVVMDLKAGRIDASLASVSFLKPLTDKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (4106. .4957)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement (3321. .4031)
/gene="tiorf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGLLIENDIAVSDTNTALALVTAGVGITFLPEWVSAMAPDGVVTRVVDDMSVEISMAV
GWNPDCPVPGILPFVEFATLAAQNLISARK"
                                                                                                                                                                                                                                                                                                                                                                                                                               complement (5022. .5795)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (5022.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (4106. .4957)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /trānslation="MDLTLLQWGDAGWGDELARGAMMTVVVAACSYFRGIIFGSLFAA
KKLSRFWSLKLLGDVTTTVNFGVELLIIFLVFFGGEGYIEPPI
FVIGVLCIESVAGAYATEVLRAAVLAVPFGGIEAAKSIGMGFWLRLKRVLIFQAARF
LPGLGNVWQFTLKDTSLISVVGLVEIMRTAAMGAGSTKQPFTFYITAFVIFLLLSSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (3321. .4031)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (2594. .3319)
/codon_start=1
/transT_table=11
                                                                 catabolism"
                                                                                 /gene="tiorf6"
/function="transcriptional regulator for nopaline
                                                                                                                                                                                    VSSKVLFLEKGQIETQGTPQEVFQNPTSPRCRAFLSSVL'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YDASPKQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNKDLKMFGPRMTGGLFGKGVGVGIRKEDADLKALFDKAIDAAIADGTVQKLSQQWFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
/transl_table=11
/protein_id="BAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /function="involved in nopaline transport (nopaline-binding protein)" (note="Probable nocT gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NRGFLKAEKWANRGVRSQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/transI_table=11
/protein_id="BAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /function="involved in nopaline transport"
/note="Probable nocQ gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /transl_table=11
/protein_id="BAA87627.1"
/db_xref="GI:6498175"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="tiorf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (2594 . .3319)
                                          note="Probable nock gene"
                                                                                                                                                                                                                                                                                                                                                                     /function="involved in nopaline transport"
note="Probable nocP gene"
                                                                                                                                                                                                                                                                                                                                                                                                             gene="tiorf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="tiorf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="BAA87629.1"
/db_xref="GI:6498177"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="tiorf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene="tiorf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="BAA87628.1"
/db_xref="GI:6498176"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="tiorf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="Probable nocM gene"
                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  function="involved in nopaline transport"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'gene="tiorf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 5795)
                                                                                                      В
                                                                                                                                          Ś
                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                           멂
                                                            5
                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Sim
Matches 1692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                           189067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188587
                                                                                                         189007
                                                                                                                                                                                        188947
                                                                                                                                                                                                                                                                        188887
                                                                                                                                                                                                                                                                                                                                                      188827
                                                                                                                                                                                                                                                                                                                                                                                                                                      188767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188647
                                                                   481
                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _
```

```
Similarity
                                                                                                             GTTCTCCCCCTTATATCTATATTGGCAAAGAAATTCTGGGGCCGGATACTTGAATCGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTTACCGGGTTTTACCATAACC
                                                                                                                                                                                                                                                                                      GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                            CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA 188766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT 188646
ĊŢĠĊŖĂŖŢĠĊĊĠĊĊĠŦŖĊĠŖĠŖŖŖŖĠĊŖĊĠŖĊĠŖŖŖĠĊĠŢŦŦŖĊĊĊŢĠŖĊĊ 189126
                                                                                                                                                                                                                                GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                   CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transT table=11
/protein_id="BAA87632.1"
/protein_id="BAA87632.1"
/db_xref="GI:6498180"
/translation="MIQSLKLGGTAQBEEALSGMRRINRLPIIIVVULVVAFLGVIFY
/translation="MIQSLKLGGTAQBEEALSGMRRINRLPIIIVVULVVAFLGVIFY
/translation="MIQSLKLGGTAQBEEALSGMRRINRLPIIIVVULVVAFLGVIFY
/translation="MIQSLKLGGTAQBEEALSGMRRIIGIEFQLVTTLQPTPVETQEE
GLTSRGLYFRGDEGGPTSGSNPASTFAQLESQVWRAFLQREGEQTLFRGVSTARGAGRAFLQANDA
XYDSPIAVDRDKFAGRCADTAAMASATTNGVSTATTSGASDLYAAALRAGLGGQNGDP
NGQKSKEDFFNADLKELGYLFNRVVPQQSIYELKRGSVIPATLITGINSDLPGRITAQ
NGQKSKEDFFNADLKELGYLFNRVVPQQSIYELKRGSVIPATLITGINSDLPGRITAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MRPCVFVMEKAMIQSRQLEAFRAVMLTGGMTSAANLVRITGPAI SRLIRDLEEEIGISLEERTGRNLRFTREAGILFKEVSKHFNGIDIEKUGHM GSLRVACYTAPALSFMSGVIQTFIADRPDVSVYLDTVPSQTVLELVSLQHYDLGISIL AGDYPGLTTEPVPSFRAVCLLPPGHRLEDKETVHATDLEGESLICLSPVSLLRMQTDA ALDSCGVHCNRRIESSLALNLCDLVSRGMGVGIVDPFTADYYSANPVIQRSFDPVVPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VSQNVYDSATGHRLLIPQGTKLFGRYDŠKVSFGQSRVLVVWTDIIFPNGSTLQIGGMA
GTDAQGYSGSRDKVDRKWLQTFGSAILIAVIGTGIDMAVPESSTLATQDTASDAARRN
FAETFGRVADRTIQRNMDVQPTLEIRPGYKFNVLVDQDIVFPGTYR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="tiorf8"
/gene="tiorf8"
/function="involved in conjugation"
/~~re="Probable trbH gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (8637. .9113)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (8637. .9113)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /function="involved in conjugation"
/note="Probable trbI gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (7308. .8624)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (7308. .8624)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HFAIVLPTDSPPPRLVSEFRAALLDALKALPYETI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /protein_id="BAA87631.1"
/db_xref="GI:6498179"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="tiorf8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="tiorf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="tiorf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Score 1605.2; 
; Pred. No. 0; 
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 206479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                         540
                                                                                                                   189066
                                                                                                                                                                         480
                                                                                                                                                                                                                                   189006
                                                                                                                                                                                                                                                                                                                                                      188946
                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

```
190026
                                                                                                                                                                                                                                                                                                                   189966
                                                                                                                                                                                                                                                                                                                                                                                                          189906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    189727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189607
                                                                                                                                                                                                                                                                                                                                                             1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
TACCAATATTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC 1679
                                                                     TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                            TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                           TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                    TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                               TGAAGAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                                                                                                                                                                                                                                                                                                             TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGTGCTTGTTTTCCTTCGAGGGGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCATTGGCGCTGGCATTTCCGGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                  TGAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTCCTTCTCCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTTTCCATGAGGGAGATATTGTGTTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCAGCCACCGAAGCTGTTCCATCGCGTTTACAGCGGTTGGCGTTCCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTGCTTGTTTTTCCTTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                            TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                င္ပ
                                                                                      1619
                                                                                                                                                                              1559
                                                                                                                                                                                                                                                                     1499
                                                                                                                                                                                                                                                                                                                                                             1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                    190145
                                                                                                                                                                                                                                                                                                                                                                                                          189965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                            190205
                                                                                                                                                                                                                        190085
                                                                                                                                                                                                                                                                                                                 190025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   189486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    189606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189366
```

음 성

음 성 음 성

유정

S 밁 δ 밁 á 밁 ঠ 밁 S 문 S В δ 밁 5 밁 δ 밁 ঠ 밁 δ 밁 Ş 밁 Ş 뮍 Ś

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
AE007927
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                      gene
                                                                                                                                      gg
                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190386 GA 190387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190206 TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190266 GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 9931)
Hinkle,G., Slater,S.C. and Goodner,B.
Complete Genome Sequence of Agrobacterium tumefaciens C58
(Rhizobium radiobacter C58), the Causative Agent of Crown Gall
Disease in Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (14-AUG-2001) Cereon Genomics,
Cambridge, MA 02139, USA
On Oct 19, 2001 this sequence version rep
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agrobacterium tumefaciens str. C58 (Cereon)
Agrobacterium tumefaciens str. C58 (Cereon)
Bacteria, Proteobacteria, Alphaproteobacteria,
Rhizobiaceae; Rhizobium/Agrobacterium group; Ag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium tumefaciens str.
the complete sequence.
AE007927 AE007871
AE007927.2 GI:16271969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hinkle,G., Slater,S.C. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AE007927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 9931)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1801
            /codon_start=1
/trans1 table=11
/producT="AGR_pTi_48p"
/protein_id="AAK90968.1"
/db_xref="GI:15163472"
                                                                                                                                /gene="AGR_pTi_48"
complement(1410...
                                                                                                                                                                                                                      /translation="myHSRPIFNIIDSSNIQDRRELKLVLRHTEIAYRSFAQEDLIPA
QRSWMNSIINTDVPIDPAIDEVVKRFCEVACLPGPAGIPLNIILNDSLTYVYCSFQAM
RKYAHKRFYDGVSDEGVVISTVPPYAEGITKETMRSWHNNVCQNTSNETHDLDAYIAF
                                                                                            complement (1410.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Agrobacterium
/mol_type="genomic DNA"
/strain="C58"
                                                                                                                                                                                                                                                                        /product="AGR_pTi_bx83p"
/protein_id="AAK90967.1"
/db_xref="GI:15163471"
                                                                                                                                                                                                                                                                                                                            /transl
                                                                                                                                                                                                                                                                                                                                                         /gene="AGR_pTi_bx83"
/note="putative indole-3-lactate
                                                                                                                                                                                                        lptslqnpsfshmkigcdsflapsrvdpfcveiiavgkalfhdnglkknprcggqwlp
                                                                                                                                                                                                                                                                                                                                                                                                            /gene="AGR_pTi_bx83"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:181661"
translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCQAAKPLNALLAT
                                                                                                                                                                                                                                                                                                                                              codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                              plasmid="Ti"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 9931
                                                                                                                                                                                                                                                                                                                                                                                            . 905
                                                                                                                                                                                                                                                                                                                          table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9931
                                                                                                                                                                  .2813)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goodner,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumefaciens str.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA linear plasmid Ti, sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45 Sidney
                                                                                                                                                                                                                                                                                                                                                              synthase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      section 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gi:15163470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C58 (Cereon)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BCT 18-DEC-2001
on 5 of 20 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190265
```

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                           Sac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MGSAGLIUNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
/translation="MGSAGLIUNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
RGRRITQISGECSAGLACKRLADGRFPEISAGEKVAALGAVIYVGKEILGRILESEW
ARARVSGLVAIDLAPFCMDFSEAQLLQTIFLLSGKRCASSDLSHFVAISISKTARSRT
LQNEPYEKGTTKRVTGFTLTLEEAVPFDNVAYGRNLMLKASAGSFFPIDLLYDYRSFF
DQCSDSGRIGFFPEDVPKPKVAIIGAGISGLVVASELLHAGVDDVTIYEASDRVGGKL
WSHAFKDAPSVVAEMGAMRFPPAASCLEFFLERYGLSSWEPPNPGTVDTMLVYQGLR
YMMKAGQDPKLFHRYVSGWARAFLKDGFHEGDIVLASVAITQALKSGDIRRAHDSWQ
TWLNRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVFESGFI
EILBLVINGYEENQRWCSEGISELPRRIATGVVNGVSVSORIRHYQVRAIEKEKTKIK
IRLKSGISELYDKVVVTSGLANIQLRCTCDTTIFRAPVNQAVDNSHMTGSSKLFLL
TERKFWLDHILPSCVLMDGIAKAVYCLDYEPQDPNGKGLVLISYTWEDDSHKLLAVPD
KKERPCLLADAISRSFPAFACHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGBDF
KKERPCLLADAISRSFPAFACHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGBDF
                                                                                                                                                                                                                                                         /gene="AGR pTi bx99"
complement(8397. .9020)
/gene="AGR pm: .9020)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DWDGLRRSAKKIDRHGNAGLGLCGIPLCFKANIATGIFPTSAATPALINHLPKIPSRV
ABRLESAGALFGASGNNHELSFGITSNNYATGAVRNPWIPSLIFGGSSGGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRPTLARYFPRDTIA IPSPTRDTAGIIAQCVADV
IILDQVISGRSAKISPMPLKGLRIGLPTTYFYDDLDADVAFAAETTIRLLANRGVTFV
EADIPHLEELMSGASLPIALYBEPHALKKYLDDFVGTVSFSDVLKGIRSPDVANIVSA
QIDGHQISNDSYLARQSFRPRLQATYRNYFRLYQLDALFFTAPLAAKAIGQESSVL
HNGSMMNTFKIYYRNVDPSSNAGLPGLSLPACLTFDRLPVGMEIDGLAGSDHRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="AGR_pTi_50p"
/protein_id="AAK90970.1"
/db_xref="GI:15163474"
/db_xref="GI:15163474"
/trānslation="MYSRYRKKLMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV
/trānslation="MYSRYRKKLMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV
/CCPQLSTGSGRFTVELKCTSRLYLLDDRPLVKGIIAAKQAHERLMGBVYNYEAHGGL
ILEGGSISLLKCMAQSSYWSADFRWHIIRHELADEETFMNVAKARVKQMLRPAAGLSI
IQELVDLWKEPRLRFILKEIJGYRYAMLFASQNQITSDMLLQLDADMEDKLIHGIAQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="AGR_pTi_50"
6089. .6838
                                                                                                                                                                                                                                                                                                                                                                                                                   /transT_table=11
/product="AGR_DTi_51p"
/product="AGR_DTi_51p"
/protein_id="AAR90971.1"
/db_xref="GI:15163475"
/db_xref="GI:15163475"
/translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKDQLQDLLSELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMUPCLSHGKD""
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD""
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD"
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD"
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD"
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD"
"MTRQGMUPCLSHGKD /translation="MTRQGMUPCLSHGKD"
"MTRGGMUPCLSHGKD /translation="MTRGGMUPCLSHGKD"
"MTRGGMUPCLSHGKD /translation="MTRGGM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="AGR_pTi_51"
7354. .7914
/gene="AGR_pTi_51"
/note="Probable 6a gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YLIHARRQEQKFPRVNAAAYDGFEGHPFGMY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLEHSWKRYNYRNRN"
6089. .6838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YSEELFFQALDMTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="AGR_pTi_49"
3151. .5418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aalekainfpsfpdafn'
/trānslation="mtvanwqvrdltlilrtgemqsrleqartdfgallpetvyfqps
airlgefddeyiltrqelvyvylrediarqcalrrhlpsnssnsgimataippwlmda
                                                           /transT_table=11
/product="AGR_pTi_bx99p"
/protein_id="AAK90972.1"
/db_xref="GI:15163476"
                                                                                                                                                                                                                           /gene="AGR_pTi_bx99"
/note="tml"
                                                                                                                                                                                                                                                                                                                                                                                        YHLIAVGCSAFLPEAALDDVESDGAV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="AGR_pTi_50"
/note="Probable tmr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /transI_table=11
/product="AGR_pTi_49p"
/protein_id="AAK90969.1"
/db_xref="GI:15163473"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              codon_start=1/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="AGR_pTi_49"
/note="(AF126446) tryptophan monooxygenase"
                                                                                                                                                            /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transI_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           codon start=1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                               S
                                                                                                                                                            В
                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                         3871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3151
                                    4051
                                                                                                                                                                                                                                                                                           3931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3691
                                                                                                                                                                   3991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                   901
                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μ
                                                                                                                                                                                                                                                                                                                                                GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                       TCGTGCTTGT
                                                                                                   TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                  TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                 GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                             ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTTCCGATAGTGGACGGATCGCCTTCTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
```

900 3990 840

4110

3930

780

3870

720

3810

3750

600

660

3690

540

3630

3570

420 3510 360

480

3450

```
Matches 1691;
                                                                                                                                                                           Similarity
CGAGAAGCTTCTAGGGGAAGGAGTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                      CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                            CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                  ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                               2639
                                                                                                                                                              Conservative
                                                                                                                                                                                                                                       ø
                                                                                                                                                                                                                                      RRLNRVMQERCDQGGLVHYYQGPHTNQFFLAIMPSNCFVRFGTDVINNENYGFYARGG
NYTEEGEDDDDEMDDEDETGGAETRDSQTGNLINYPIIALGSCHLSA"
a 2177 c 2364 g 2751 t
                                                                                                                                                                           93.8%;
                                                                                                                                                           <u>,</u>
                                                                                                                                                                           Score
Pred.
                                                                                                                                                              Mismatches
                                                                                                                                                                           1603.6;
No. 0;
                                                                                                                                                              109;
                                                                                                                                                                                         DB
                                                                                                                                                                                         1;
                                                                                                                                                              Indels
                                                                                                                                                                                         Length
                                                                                                                                                             2
                                                                                                                                                           Gaps
                                         3270
                                                                                                    3210
           180
                                                                     120
                                                                                                                                60
```

3330

240

3390

RESULT 9 AE009419 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM	gg dg	D 92 D	Q B Q	Qy Db	g Qy	Qy db	D Qy	B &	g Qy	Qy Db	d Qy	9 8	B &	Qу
AE009419  AE009419  AE009419  N Agrobacterium tumefaciens str. C58 Ti plasmid, section 2 of 21 of the complete sequence. AE009419 AE008690  AE009419.1 GI:17744019  Agrobacterium tumefaciens str. C58 (U. Washington)  Agrobacterium tumefaciens str. C58 (U. Washington)  Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.	1800 GA 1801    4950 GA 4951	4830 GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCT 4889  1740 TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGGCTGAGCTATGAGTCGCAGGATCC 1799  111111111111111111111111111111111	1620 TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC 1679	1560 TAAGGTGGTGGTACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA 1619 	1500 TCAGAAGGAAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1559  -   -	1440 TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGCGAT 1499 	1380 TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC 1439 	1320 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTTGGTCATCAACGGATA 1379	1260 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319	1201 GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 1259	1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1200	1081 GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA 1140	1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC 1080	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020 
			· .			7	d _	3		REF A				REF A
gene	CDS	gene		CDS		source	AL.				JOURNAL MEDLINE	1777.5		REFERENCE AUTHORS
/codon_start=1 /trans1_table=11 /product="agrocinopine synthesis reductase" /product="agrocinopine synthesis reductase" /product="agrocinopine synthesis reductase" /protein_id="AAL46243.1" /db_xref="GI:17744021" /db_xref="GI:17744021" /translation="MHEGGIGPRKMFVENYPDCEKTELFSARVAGALTHARRSNILEV /translation="MHEGGIGPRKMFVENYPDCSSWNVHTRDSGVILVTGASGGIDK SHGGVLSVVATILLGVELTANQGCVLHFKFDGSSWNVHTRDSGVILVTGASGGRIV SHGGVLSVVATLLGVELTANGGIDYEQLERQWKINAGAPLRMIMLCLPQLAKSGSGRIV AIDDLMRRGFRLSIGARSVEKLEATFGFQNESLHFARFEADLLGTMEEWSSTAMIKF GRIDGLVNNAGDGTRVALLAEGIDYEQLERQWKINAGAPLRMIMLCLPQLAKSGSGRIV NIISMSGQRVLNSEVGYNMTKHALSGLTKTAQHYGWESGVRTMSICPGVATKWSAGT NIISMSGQRVLNSEVGYNMTKHALSGLTKTAQHYGWESGVRTMSICPGVATKWSGSTVYGP EFEDDGKIQPEHIAELVRQAIERPNNAFVPKIEVLCIQQPLAVRSRSKVGGSIVYGP KPRPGCQCAH" Complement (16222878)	<pre>/note="synonym: Atu6007" complement(3801414) /gene="mas1" /note="identified by sequence similarity; putative; located using Blastx/Glimmer"</pre>	/procein_id="AAL4642.1" /db_xref="GI:17744020" /translation="MDLYLIFGPTCTGKTAAAITLSEHTGIPVLALDRIQCCPQLSTG /SGRPMAAEYTAPQSLGQKRC" complement(3801414) /gene="masl"	/note="identified by sequence similarity; putat located using Blastx/Glimmer" /codon_start=1 /transT_table=11 /product="isopentyladenosine phosphotransferase	/gene="ipt" /note="synonym: Atu6006" 319. 513 /gene="ipt"		1. 10377 1. 10377 /organism="Agrobacterium tumefaciens str. Washington)" /mol tyne="conomic DNA"	Submitted (27-SEP-2001) Department of Microbiology, Usashington, 1959 NE Pacific Ave, Box 357242, Seattle, 98195-7242, USA	Krespan, W., Perry, M., Gordon-Kamm, B. Krespan, W., Dolan, M., Tingey, S.V., Tomb Zhao, Z., Dolan, M., Tingey, S.V., Tomb and Nester, E.W.	Gillet, W., Grant, C., Guenthner, D., Kutyavin, T., Levy, R., Li, M., McClelland, E., Palmieri, A., Raymond, C., Rouse, G., Paulsen, I., Saenphimmachak, C., Wu, Z., Gordon, D., Bisen, J.A., Paulsen, I., Paulsen, J., Paulsen, J., W., W., W., W., W., W., W., W., W., W	2 (bases 1 to 10377) 2 (bases 1 to 10377) Chen, Y., Woo, L., Kitalima, J.P., Okura Connert V. Borner B. Connert V. B. Con	tumefaciens C58 Science 294 (5550), 2317-2323 (2001) 21608550	Krespan, W., Perry, M., Gordon-Kamm, B., Liao, L., Kim, S., Hendrick Zhao, Z., Dolan, M., Tingey, S.V., Tomb, J., Gordon, M.P., Olson, M.V and Nester, E.W.	Gillet, W., Grant, C., Guenthner, D., Kutyavin, T., Levy, R., Li, M., McClelland, E., Palmieri, A., Raymond, C., Rouse, G., Paulsen, I., Saenphimmachak, C., Wu, Z., Gordon, D., Elsen, J. A., Paulsen, I., Karn, P. Romero, P. Zhang, S. Yoo, H. Tao, Y. Biddle P. Jung M. Karn, P. Romero, P. Zhang, S. Yoo, H. Tao, Y. Biddle P. Jung M.	1 (bases 1 to 10377)  1 (bases 1 to 10377)  Chen,Y., Woo,L., Kitajima,J.P., Okura,  Chen,Y., Rives Cr. D. Charman B. Cla

```
gene
                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="megtywpawtlhwdlpenvtppevlarhsvprllerleedlplo/
VIEHRGMFNLGKRIQECTASSLLAALGGGGRNLSELDVCLTSDWAIVSHDLNTWRVS
EKLGDKLFNEIHSSKIKDVPVIIREVSNGIIODKYLETIDHIPLITEIFEKVFLANSD
ATIFLDGRNVEAHVIVAWLSHRPEYHQRVVVLFYTFEVPHGGAFVDAVLNAQPASAWR
KSIALMPALFFEELCRLARLRQVTEFTVDDLYLAGKAWFDSMLWODMRIVAHVVFSG
VTRNLLGQVVDKDVLLAFDSDQAAVRLAYYLKEDTMIEAKRHLKFAAVTRCVDFAAIU
LDSGERGEFSIDIKTGRARRHETDERKHIRWRKGTFGNSATIADWVISDRPEDEMAIW
                                                                                                                                                                                                                                                                                                                                                                          EADIPHLEELNSGASLPIALYEFPHALKKYLDDFVGTVSFSDVIKGIRSPDVANIVSA
QIDGHQISNDEYELARQSFRPRLQATYRNYFRLYQLDAILFPTAPLAAKAIGQESSVI
HNGSMMNTFKIYVRNVDPSSNAGLPGLSLPACLTPDRLPVGMEIDGLAGSDHRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                       DWDGLRRSAKKIDRHGNAGLGLCGIPLCFKANIATGIPPTSAATPAALINHLPKIPSRV
AERLFSAGALPGASGINHELSFGITSINIYATGAVRIPMPISLIPGSSGGVAAAVASR
LMLGGIGTDTGASVELPAALCGVVGFRPTLARYPRDRIIPVSPTRDTAGIIAQCVADV
IILDQVISGRSAKISPMPLKGLRIGLPTTYFYDDLDADVAFAAETTIRLLANRGVTFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (4662. .6065)
/gene="tms2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THDLDAYIAFLPTSLQNPSFSHMKIGCDSFLAPSRVDPFCVEIIAVGKALFHDNGLKK
NPRCGGQWLPPSC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /trānslation="mnsiintdvpidpaidevvkrfcevaclpgpagiplniilndsl
TyvycsfQamrkyahkrfydgvsdegvvistvppyaegitketmrswhnnvcQnisne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="acsx"
/note="synonym: Atu6008"
complement(1622. .2878)
                 ARARVSGLVAIDLAPFCMDFSEAQLLQTLFLLSGKRCASSDLSHFVAISISKTARSRT
LQMPPYEKGTTKRVTGFTLTLEEAVPFDMVAYGRNLMLKASAGSFPTIDLLYDYRSFF
                                                          /translation="MSASALLDNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
RGRRITQISGECSAGLACKRLADGRFPEISAGEKVAALSAYIYVGKEILGRILESEPW
                                                                                                                                                                                                                                                                                                                                                       AALEKAINFPSFPDAFN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (4662. .6065)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /transI_table=11
/product="gene 5 protein"
/protein_id="AAL46245.1"
/db_xref="GI:17744023"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="synonym:
3636. .4157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EWRNQGIDREVSHLSPHLDLNIETSK"
DQCSDSGRIGFFPEDVPKPKVAIIGAGISGLVVASELLHAGVDDVTIYEASDRVGGKI
                                                                                               (crans] table=11
/product="tryptophan 2-monooxygenase"
/protein id="AAL46247.1"
/db_xref="G1:17744025"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="indole acetamide hydrolase"
/protein_id="AAL46246.1"
/db_xref="GI:17744024"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="identified by sequence similarity; putative; ORF located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="synonym: Atu6010"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="identified by sequence similarity; putative; ORF
located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="gene5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="agrocinopine synthase"
/protein_id="AAL46244.1"
/db_xref="GI:17744022"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codon_start=/transl_table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="identified by sequence similarity; putative; ORF
ocated using Blastx/Glimmer"
                                                                                                                                                                /codon_start=1
/transl_table=
                                                                                                                                                                                                       'note="identified by sequence similarity; putative; ORF
ocated using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                          /note="synonym:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCQAAKPLNALLAT/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene="tms2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene="genes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            table=11
                                                                                                                                                                                                                                                                                          Atu6011"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Atu6009"
                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                   밁
                                                 Ś
                                                                                                   밁
                                                                                                                                      5
                                                                                                                                                                                    밁
                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 1691;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SdO
                                                                                                      6883
                                                                                                                                                                                      6823
                                                                                                                                                                                                                                                                                                                                                         6703
                                                                                                                                                                                                                                                                                                                                                                                                                                           6643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                               481
                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                     CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2745
```

```
CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                             TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCCGGGTTTACCCTGACC
                                                                                                                            cTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                           GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVEELKGTSRLYLDDRPLVKGIIAAKQAHERLMGEVYNYBAHGGLILEGGSISL
LKCMAQSSYWSADPRWHIIBHELADEETFMVVAKARVKQMLRPAAGLSIIQELVDLWK
EPKLRPILKEIDGYRYAMLFASQNQITSDMLLQLDADMEDKLIHGIAQEYLIHARRQE
QKEPFRVNAAAYDGFEGHFGMY"
3 2376 c 2438 g 2818 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WSHAFKDAPSVVAEMGAMRFPPAASCLFFFLERYGLSSMRPFPNPGTVDTNLVYQGLR
YMWKAGQQPPKLFHRVYSGWRAFLKDGFHEGD IVLASFVAITGALKSGDI IRAHDSWQ
TWLNRFGRESSSAIERI FLGTHPPGGETWSFPDHMDLFKLMGIGSGGFGPVERSGFI
EILRLVINGYEENQRMCSEGISELPRRIATQVVNGVSVSQRIRHVQVRAIEKEKTKIK
IRLKSGISELYDKVVVTSGLANIQLRHCTCDTTIFRAPVNQAVDNSHNTGSSKLFLL
TERKFWLDHILPSCVLMDGIAKAVYCLDFDDPNGKGLVLISYTWEDDSHKLLAVPD
KKERFCLLRDAISRSFPAFAQHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGEDF
YSEELFFQALDMTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/trans1_table=11
/product="isopenteny1_transferase"
/protein_id="AAL46248.1"
/db_xref="GI:17744026"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="identified by sequence similarity; putative; ORF
located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note="synonym: Atu6012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EHSWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1603.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6642
                                                                                6942
                                                                                                                                                                                                6882
                                                                                                                                                                                                                                                                                                              6822
                                                                                                                                                                                                                                                                                                                                                                                                                               6762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6462
                          600
                                                                                                                                        540
                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
```

5 B 5 B 5 B

δ

망

밁

```
1081
                                                                                                                                                                                                                                                                                                                 7842
                                                                                                                                                                                                                                                                                                                                                           1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7483
  1680
                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                   TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                  TAAGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                              TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                      TGAGAAAGAAAAGACAAAAATAAAGATAAAGCCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                    TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                            TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                      TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGTCCTTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACACCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCAGCCACCGAAGCTGTTCCATCGCGTTTACAGCGGTTGGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGTGCTTGTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGCTTGTTTTTCCTTCCAAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAAGGACGCTCCCAGCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                         TACCACCATTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
1739
                                         8081
                                                                                                                                    8021
                                                                                                                                                                            1619
                                                                                                                                                                                                                        7961
                                                                                                                                                                                                                                                                     1559
                                                                                                                                                                                                                                                                                                                                                         1499
                                                                                                                                                                                                                                                                                                                                                                                                     7841
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                      1679
                                                                                                                                                                                                                                                                                                                 7901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
```

δ

음 성 음 성 음 성 음

δ B

밁

δ

밁

유 성

음 성 음 성

음 성 음 성

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
AF126446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
gene
                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                              SGD
                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Otten, L., De Ruffi
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence and functional analysis of the left-hand T-region from the nopaline-type Ti plasmid, pTiC58 plant Mol. Biol. 41 (6), 765-776 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agrobacterium tumefaciens (Rhizobium radiobacter)
Agrobacterium tumefaciens
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complete cds.
AF126446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AFI26446 BCT 25-FEB-Agrobacterium tumefaciens plasmid pTiC58 agrocinopine synthase (acs) gene, partial cd8; and 5 protein (5), indole-3-acetamide hydrolase (iaaH), and tryptophan monooxygenase (iaaM) genes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (08-FEB-1999) Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ruffray, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Otten, L., Salomone, J.Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rhizobiaceae; Rhizobium/Agrobacterium group;
1 (bases 1 to 5968)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF126446.1 GI:4836565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10737141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 5968)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strasbourg 67804,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8203
                                              /translation="myhsrpifniidssniqdrrelklylrhteiayrsfaqedlipa
Qrswmnsiintdvpidpaidevykrfcevaclpgpagiplniilndsltyvycsfqam
RKYAHKRfydgvsdegvvistvppyaegitketwrswhnnvcQntsnethdldayiaf
complement (1953.
                                                                                            /product="5 protein"
/protein_id="AAD30487.1"
/db_xref="GI:4836567"
                                                                                                                                                                                                                                                                                                                                                                            complement (<1. .19)
                                                                                                                                                                                                                                                                                                                                                                                                           complement (<1. .19)
                                LPTSLQNPSFSHMKIGCDSFLAPSRVDPFCVEIIAVGKALFHDNGLKKKPKVWWSMAP
                                                                                                                                               /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                           /product="agrocinopine synthase"
/protein_id="AAD30486.1"
/db_xref="GI:4836566"
                                                                                                                                                                                                                                                                                                                             /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                             /gene="acs"
                                                                                                                                                                                                                                                                                                                                                                                             /gene="acs"
                                                                                                                                                                                                                                                                                                                                                                                                                            /plasmid="pTiC58"
/note="Ti plasmid; T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Agrobacterium
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            De Ruffray, P.
                                                                                                                                                                             function="may catalyze"
                                                                                                                                                                                                                             'gene="5"
                                                                                                                                                                                                                                                              translation="MFNLGK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain="C58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            xref="taxon:358"
                                                                                                                                                                                                                                                                                                                              table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helfer, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hammann, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biology,
                                                                                                                                                                             synthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schmidt, J., Hammann, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBMP,
                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agrobacterium
                                                                                                                                                                               indole-3-lactate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             du
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               General
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BCT 25-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zimmer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þ
```

```
BASE COUNT
ORIGIN
                          5
                                                                     밁
                                                                                                               S
                                                                                                                                                                    밁
                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                        ঠ
문
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 1690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SgS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sab
                                                                                  3930
                                                                                                                                                                                                                                                                                                                                                                                                                                  3690
                                                                                                                                                                       3870
                                                                                                                                                                                                                                                           3810
                                        301
                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                        CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                    GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                          GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                 GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                      CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                      CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTGGGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                         GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                             CGTGAAGCTT
                                                                                                                                                                                                                                                                                                                                              CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /trans1_table=11
/product=""ryptophan monooxygenase"
/product=""ryptophan monooxygenase"
/protein_id="NAD30489.1"
/protein_id="NAD30489.1"
/protein_id="MAD30489.1"
/db xref="01:4835569"
/db xref="01:4835569"
/db xref="01:4835569"
/db xref="01:485669"
/db xref="01:485669"
/db xref="01:485660"
/db xref="01:485660"
/db xref="01:485660"
/db xref="01:485660"
/db xref="01:485660"
/db xref="01:4835660"
/db xref="01:4835660"
/db xref="01:4835660"
/db xref="01:4835660"
/db xref="01:4835660"
/db xref="01:4835660"
/db xref="01:485600"
/db 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MVPITSLAQTLERLRKDYSCLELVKTLIARCQAAKPLNALLAT
DWDGLERTAKKIDRHGNAGLGLGIPLCFKGNIATGIFPTSAAFALTNHLPNITSRV
PQTLFSAGPLFQASCNMHELSFGITSNNYATGALVRNDWNDSLIPGGSSGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRPTLARYPRDRIIPVSFTRDTAGIIAQCVADV
IILDOVISGRSAKILPMPLKGLRIGLFTTYFVDDLDADVAFAAETTIRLLANRGVTFV
EADIPHLEELNSGASLPIALYFFPHALKKYLDDFVGFTFLTFQRIRSPDVANITVSAG
EADISHDEVELARQSFRPRLQATYRNYFRLYQLDAILFFTAFLAKAIGQESSVIH
NGSMMNTFKIYVRNUDPSSNAGLPGLSLPACLTFDRLFVGMEIDGLAGSDHRLLAIGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="iaaH"
complement(1953. .3353)
/gene="iaaH"
/function="synthesizes indole-3-acetic acid from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YSEELFFQALDMTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
PLEHSWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="iaaM"
3690. .5957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALEKAINFPSFPDAFN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
/transI_table=11
/product="indole-3-acetamide
/protein_id="AAD30488.1"
/db_xref="GI:4836568"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=:/transl_table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3690. .5957
/gene="iaaM"
/function="synthesizes indole-3-acetamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indole-3-acetamide"
                                                                                                                                                                                                                                                           rctaggggaaggargattactcaaarctccggcgagtgcagcgcrgggtta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1333 с
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1472 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1602;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1620 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hydrolase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 5968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tryptophan"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                3809
                                                                                                                                                                                                                                                                                                                                                                                                                                  3749
  4049
                                        360
                                                                                                                                                                         3929
                                                                                                                                                                                                                                                           3869
                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                    3989
                                                                                                                            300
                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                  рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                    뮍
                                                   δ
                                                                                                      밁
                                                                                                                                            δ
                                                                                                                                                                                           밁
                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                             4950
                                                                                                                                                                                                                                                                                  4890
                                                                                                                                                                                                                                                                                                                                                                    4830
                                                                                                                                                                                                                                                                                                                                                                                                                                                      4770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4110
                                                                                                                                                                                                                                     1260
                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                          TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGCTTGTTTTTCCTTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAAGATGTGCA
                                                   TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                            GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                          ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCAGGGATAGAGAGAGTCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                  TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGTGCTTGTTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCATTGGCGCTGGCATTTCCGGGACTCGTGGTGGCAAGCGGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                      TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                                                                                                                                                             ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                    4889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4469
                        5128
                                                                1439
                                                                                                          5068
                                                                                                                                                     1379
                                                                                                                                                                                               5008
                                                                                                                                                                                                                                       1319
                                                                                                                                                                                                                                                                                  4949
                                                                                                                                                                                                                                                                                                                            1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                         4829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4109
                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
ATU237588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ર્શ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5489 GA 5490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acrocinopine synthase; agrocinopine synthase; IAH; isopentenyl transferase; nopaline synthase; ornithine cyclodeaminase; protein 6a; protein 6b; torf1 gene; torf10 gene; torf11 gene; torf12 gene; torf13 gene; torf14 gene; torf15 gene; torf16 gene; torf17 gene; torf18 gene; torf19 gene; torf2 gene; torf20 gene; torf21 gene; torf22 gene; torf3 gene; torf4 gene; torf5 gene; torf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Agrobacterium tumefaciens Ti
AJ237588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gielen, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gielen, J., Terryn, N., Van Montagu, M. and Villarroel, R. Complete nucleotide sequence of the T-DNA region of the plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AJ237588.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ledeganckstraat 35 Gent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GA 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAGAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 29524)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Agrobacterium tumefaciens Ti plasmid pTiC58
                                                                                                                                                                                                         complement(<1. .575)
/gene="torf1"
                                                                                                                                                                                                                                                                                                                           /mol_type="genomic D
/db_xref="taxon:358"
/plasmid="pTiC58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (24-MAR-1999) Gielen J., Genetics, VIB/UG, KL
straat 35 Gent, 9000, BELGIUM
                                                                                                                                                                                                                                                                                                 complement (1. .575)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
translation="MHPEDRARGLRRAFRLHRFCLPSHPAQAYHRGDQLSPRVAINLF"
                         /product="hypothetical protein"
/protein_id="CAB44625.1"
/db_xref="GI:5042180"
                                                                                                                       codon_start=1/
transl_table=
                                                                                                                                                                                                                                                                     /gene="torf1"
                                                                                                                                                                                function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Agrobacterium tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:5042179
                                                                                                                                                                                                                                                                                                                                                                                          _type="genomic DNA"
                                                                                                                          table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp DNA linear BCT (plasmid pTiC58 T-DNA region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BCT 09-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5248
                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                            Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                          repeat_region
translation="MYNLGKGVQECTETSLLTALGGMERRNLSELDTTLTSDNLPVVS
```

```
/translation="MGEESGEIPGASGRVMVIDPIDGTFNFVRGGQNWAISIGLYENR RPSFGVIYAPVRDLILVGGKTVPTRLNGQPIKPLPALDMSRASTGFSRFISDDLKISF RFCGAATLSMIEVVMGETDGYVSLGDSTWDVMAALPILGHLGISNTIDWDRIDLSSKL RFACGSEEFLSKVRPLIEKVSAAA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="MVQSPSGGIGGRRAGATRPLCEARRTRNPTGRRRRLQSGLSASE
LEIINNNIIATGENTASTDEELDSLERELRELAIGVOTVELALUSSLDLIAGGRIVKE
RGDRLRTLLETSFRYTVHGLVSSNEWDPATRRHQVDAKALVEICDSIDDRNLVPHA
GFLRADQIAQRAGADERQCEALLELGEHAKAYGIRIAFENIFTTEPGQYRQTPAEVAA
GFLRADQIAQRAGADERQCEALLELGEHAKAYGIRIAFENIFTTEPGQYRQTPAEVAA
TVXAVMHPDVVALIDFKPRLPGIQLSRPRFPRSVARHGPVLGAPGRRLSRRTATTRIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/trans[_table=11
/product="hypothetical protein"
/protein_id="CAB44627.1"
/db_xref="GI-5042182"
/codon_start=1
/transT_table=11
/product="agrocinopine synthase"
/protein_id="CAB44630.1"
/db_xref="GI:5042185"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transT_table=11
/product="hypothetical protein"
/protein_id="CAB44628.1"
/db_xref="GI:5042183"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (1359. .1886)
/gene="torf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (1359. .1886)
/gene="torf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RQEIRRPRSGRQTRKIQEACLRMVGEQERPGLSKEERAFYAHAADYGIFAQLILDQCR
QSIMTFTEYDRLGRDHDPYAVRRKDHAGTAQARAIAAMRAADAPSSRRMVTAPTMISG
                                                                                                                                                      complement (4009.
                                                                                                                                                                                                        complement (4009.
                                                                                                                                                                                                                                                                                                                                                                                                         /product="hypothetical protein"
/protein_id="CAB44629.1"
/db_xref="GI:5042184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (2090.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (2090.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EREIQRAAAVASKAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="mpgepagQTalarlamvADKLWTGEIRTQYAAICYRRTDDSSGp
IEVLLITSRGTGRWVIPKGWPMAKKKPHEVASQEAWEEAGVRGRVRKKAWGHYTYVKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VITDGGMECSTGWTS'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="hypothetical protein"
/protein_id="CAB44626.1"
/db_xref="GI:5042181"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (604. .1479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLVLLISGSATGGSMTNAANSTGSSGAGRTS"
                                                                                                                                                                                                                                                        'rpt_family="T-DNA left border"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="torf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="torf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="torf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="torf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="torf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (604. .1479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .GDGEFIPAMVQVHLLDVQRMEDDFPERHQRELQWFSPRLAASAVGEPELRGLFARLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'tunction="unknown"
                                                                                                                                                                                                                                   type=DIRECT
                                                                                                                                                                                                        .5124)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .2644)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2644)
```

gene

```
complement (7150. .8721)
/gene="torf8"
complement (7150. .8721)
/gene="torf8"
LRCCFTGKTNTCL"
12368. .13312
/gene="torf11"
12368. .13312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MENONTPVEAIERKLKSSWLHSLHVRKILPSPFLGGPYSYITEE
TDVGGEADCIRGHSVTPLPEDBGMVSHHMQQIFCSTHQPAXHDVDAFALRAAPEPAV
IPDEDIADKSYRPFASSENSLTDIHMRQLIFCSTHQPAXHDVDAFALRAAPEPAV
IPDEDIADKSYRPFASSENSLTDIHMRMFLEGRNAWATQARKERDDAFVLIELPSLF
KEVKYLRRSAQSIQTQEMRWQLKCHLPLWERGLFWLMUVUMQLAVVLPDIVISASLGA
EVAVLRSGPITLQTQLMVLAIFDYPWADTRLAAHLACEVFLGGLPVLIFGLFAIAMPQ
HEGTTFHTAKDVAWKASLCILMQMLMQNRKNINDLLKYSFLMWVGHIADDNDRSPGST
TRLRNSSTITIYSWLDTFEVSNRLRIQIGYHXQDHDDALKYSFLMWVGHIADDNDRSPRGG
KAGILVAILTWAGLICLSTFPTDAYSGLIAAANLVPLAARAAVDVMNNSQSSHDLFRLF
FTATAGVSFPSTLFVLGNSSYWLLTKKSFLAGFANIHFWIAFVLIFFLSLFPKLWGRL
FTYYGSRLLNDRSRA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HDFNTWRISTLPDRLIRELHSADVKNIPVIIREVSNGEITESYTVTNDIIPFLEPLLD
KVEPUNPGATEFLOGRDFEAHIITAWLSRRPKYRQRVVLLFYTEBYSSGEAFEDAVKQ
VSPEPDWRETVALMPVIFPQELPRLAKLIDLSDIAVEDLYEGKKIWIDSMLRQPMRVV
AVHIVMARVKEEOLGLCDKPEIVRAFNADYAAVRLAYYVKDNEBVRKMRPHLKLATAF
RCYDFSAQLENGEKAEFSINIRTGRPMPRETDERKYIRRGYGIPGNAAAIADWVISDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="mhtslmsynonmipsgddrpvfptidlfantsleelogslcaav
anyrdfltrkilpfogsmvvrvlsesgldeftralksgvftpccs:pgavopdrimo
hdspiyiytslnllsoyvegktllrcyrkfvlasslppyrtdipaeelknvlnsilpg
aysmphavsgtvailbskfyismskittrggaeehfvvfsreendiipydivavgkt
lfsosdeefglpnlsfdelonlist"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="torf9"
9762. .10493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="myyerpurdivdTweIrereVLKPVLSVAEEDYCYFVQNTVASA
QRSWYDLVANLFNS POSDIDDALNRFADAFCLHGFTLEPMYLLKGSPWYVYCSFEEM
RSCATKRFYEGISNRGVVICTYPPYAEGVTRDDMSVMQNQACVNTCSGKMUDLDAXIA
LPTSSLQESSYWHTKNGIYSFLAPSQTDAFCCEILCVGRALFEDRSRKEKLRNCLLKL
                                                                                                                       /translation="MMVYQRPVFTV1SLLRIRNREEAKLVLIGAVVVYRNFVEQTLADAQKNMVKSLVLYDDPGDAVFTGILTWFSRXPACLHGFRLGFLDTLAVNDNPLYIYCFRRK LEEKPKERIVSFHSEIGSVUCGMSFPDAGUTREKVRYCHUHLISPGSCLLPDALEAVF FLDSKSFLKLPYSVYEVHNDRYVHKFFALLPGSRFHFEVVAVGLAYPAAKKRPSGLGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="torf10"
11195. .11890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transl_table=11
/product=-lhypothetical_protein"
/protein_id="CAB44633.1"
/db_xref="GI:5042188"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9762. .10493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="hypothetical
/protein_id="CAB44632.1
/db_xref="GI:5042187"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="hypothetical protein"
/protein_id="CAB44631.1"
/db_xref="GI:5042186"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6011. .6694
/gene="torf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEDEMSFWEWRNKGVPRRVDHHCPHLDVIEQDGKSVP
                                                                                                                                                                                                                                               /product="hypothetical protein"
/protein_id="CAB44634.1"
/db_xref="GI:5042189"
                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="torf9"
/function="phosphatase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
/transI_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="torf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                        gene="torf10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                           function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .11890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al protein"
2.1"
```

gene

gene

밁

GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT

20826

Sgo

gene

```
Ş
                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
 5
                              밁
                                                             Ş
                                                                                                  밁
                                                                                                                        δ
                                                                                                                                                              밁
                                                                                                                                                                                      S
                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                              멼
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Sim
Matches 1690;
                                                                                                                                                                                                                                                                                                                                                                                                           20347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19987
                                                                                                   20647
                                                                                                                                                                20587
                                                                                                                                                                                                                          20527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20107
                                                                                                                                                                                                                                                                                                                                                 20407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20287
                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                  661
                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                      TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                              GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCAGCTTCAGCTCCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                          TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                     CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                   CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGAAGCTTCTAGGGGAAGGAGTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                         ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA
                                                                                                     TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                          CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                         CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                 TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAGTCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                            GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MMVPPRPGFAPLSLESINDRMEMHLFLTSACILYHIYIRDNLLI
YQEIWTXYWRGKLAESALKWEISALYLEKIPFRRPTLOSIAEQBYICKDAAPIYVYCS
REAMLSHVQSKDLCQFGRANLLACTLAPYRTGYTIEMVCLFKRLRDGNRVEAGTGEE
DLSHFVAFLPTTAFRRGFRFYLGGENVQFFLREGGLELFCHI1AFGRALFSEILADGS
SWDWKSVGESSRLNHVRASVELSRNVPTAETTDNWAEAALGTDAVYPVRPPNLTPTQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/transT_table=11
/product="hyppothetical_protein"
/protein_id="CAB#4635.1"
/db_xref="GI:5042190"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene="torf11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1602;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 29524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
              840
                                                                        780
                                                                                                                                                                                               660
                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                       20706
                                                                                                                                     720
                                                                                                                                                                 20646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                            20766
                                                                                                                                                                                                                            20586
                                                                                                                                                                                                                                                                                        20526
                                                                                                                                                                                                                                                                                                                                                     20466
                                                                                                                                                                                                                                                                                                                                                                                                              20406
```

```
RESULT 12
AB025110
LOCUS
                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
     DEFINITION
                                                                                                                                                                                                                                                                   21666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21007
                                                                                                                                                                                                                                                                                                                                              21606
                                                                                                                                                                                                                                                                                                                                                                                    1620
                                                                                                                                                                                                                                                                                                                                                                                                                         21546
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20887
                                                                                                                                                                                                                                                                                                         1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
AB025110
Agrobacterium
                                                                                                                  g.
                                                                                                                                                     GA 1801
                                                                                                                                                                                                                TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                 GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                              TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                       TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA 1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAGAAAGAAAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAGTGGTTAACGGTGTGTGTAAGCCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGTCCTTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGTCCTTCTCTCAGGGATAGAGAGAGCATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTTTCATGAGCGAGATATTGTGTTTGGCTTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCAGCCACCGAAGCTGTTCCATCGCGTTTACAGCCGTTGGCGTTCCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGCTTGTTTTTCCTTCCAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                            TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                     GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGTGCTTGTTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCA
 tumefaciens gene
                     4660 bp
for indole acetamide
   hydrolase and
                     BCT 27-MAR-1999
                                                                                                                                                                                         21785
                                                                                                                                                                                                                              1799
                                                                                                                                                                                                                                                                                                         1739
                                                                                                                                                                                                                                                                                                                                                                                  1679
                                                                                                                                                                                                                                                                                                                                                                                                                       21605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1080
                                                                                                                                                                                                                                                                   21725
                                                                                                                                                                                                                                                                                                                                              21665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
Direct Submission
Submitted (18-MAR-1999) Takehide Kasahara, Nippon Paper Industries
Co., Ltd. R&D Div., Wood Bio-engineering Central Research Lab.;
Co.1, Oji, Kita-ku, Tokyo 114-0002, Japan
(B-mail:takek@mtj.biglobe.ne.jp, Tel:81-3-3911-5106(ex.292),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium tumefaciens plasmid PO22 indole (laaH), tryptophan monooxygenase (laaM) genes Published Only in DataBase (1999) 2 (bases 1 to 4660) 2 (bases 7., Endo,S., Ebinuma,H., Sugita,K., Morthaga M., Endo,S., Ebinuma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tryptophan monooxygenase; indole acetamide hydrolase
Agrobacterium tumefaciens (Rhizobium radiobacter)
Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tryptophan monooxygenase, AB025110 GI:4586311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax:81-3-3914-3350)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 4660)
Kasahara, T., Endo, S., Ebinuma, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Morimae, N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Morimae, N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                       1174
                                       Ø
                                                       DQCSDIGRIGFFEDVEKKVAIIGAGISGLVVASELLHAGVDDVTIYEASDRVGKL
WSHAFKDAPSVVAEMGAMREPPAASCLFFFLERYGLSSMRPFFNEGTVUTNLVYQGLR
YVWKAGQOPEKLFHRVYSGWRAFLROGFHEGDIVLASPVLTYQALKSGDI RRAHDSWQ
TWLNRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVFESGFI
EILRLVINGYESNQRMCSEGISELPRRIASQVVNGVSVSQRIHVQVVRAIEKEKTKIK
IRLKSGISELTXCKVVTYSGLANIQLAHCLTCOTTIFRAPVUQAVDNSHMFGSSKLFKIK
TERKFWLDHILPSCVLMDGIAKAVYCLDYEPQDPNGKGLVPPTYTWEDDSHKLLAVPD
KXERFCLLRDAISRSFPAFAQHLVPACADYDQNVVQHWLTDENAGGAFKLNRRGEDF
YSEELFFQALDMPNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
PLEHSWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MSASPLLDNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
RGRRITQISGECSAGLACKRLADGRFBEISTGEKVAALSAYIYVGKEILGRILGSEFW
ARARVSGLVAIDLAPFCMDFSEAQLLOTLFLLSGKRCASSDLSHFVAISISKTPASFI
LQMPPYEKGTTKRVTGFTLTLEEAVPFDMVAYGRNLMLKASAGSFPTIDLLYDYRSFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AALEKAINFSSFPDAFN"
                                                                                                                                                                                                                                                                                                                     /transl table=11
/product="tryptophan monooxygenase"
/protein_id="BAA76346.1"
/db_xref="GI:4586313"
                                                                                                                                                                                                                                                                                                                                                                                                                   2096. .4363
/gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="indole acetamide hydrolase"
/protein_id="BAA76345.1"
/db_xref="GI:4586312"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (353. .1756)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db_xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DNA"
/strain="PO22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Agrobacterium
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .4660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ement(353. .1756)
                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complete
                                       1276 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sugita, K., Kawaoka, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indole
                                       1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kawaoka, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acetamide hydrolase
```

δ	문	Ş	망	ş	B 8	Db .	\$ 8	\$ 8	용 성	₽ 5	g B	<b>9</b> 8	\$ \$	<u> </u>	유 성	B 성	B &	₽ ₽	\$	유 성	유 <b>성</b>	В	Ş	Duer Matc
1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCTTGAAGGAC 1080	CCCGGCACAGTCGACACTTAGCTCTACCAAGGCCTCCGATACGTGTGGAAAGCCGGG	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020	TCGTGCTTGTTTTTCTTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT	1 TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT	841 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 900		2816 ATCATTGGCGCTGGCATTTCCGGACTCGTGGTAGCGAAGCGAACTGCTTCATGCTGGTGTA 2875 781 GACGATGTTACAATATGAAGCAAGGTAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT 840	GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	2696 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA 2000	CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT	541 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	361 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420	301 CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360	2336 GCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA 2395	GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAACTGGTGAGAAGGTAGCA	GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCA	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180	61 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120	2096 ATGTCAGCTTCACCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT 2155	GTCAGCTTCACCTCTCGTTGATAACCAGTGCGATCATCTCCCAACCAA	Query Match 88.7%; Score 1597.2; DB 1; Length 4660; Best Local Similarity 93.6%; Pred. No. 0; Matches 1687; Conservative 0; Mismatches 113; Indels 2; Gaps 2;
TITLE	REFERENCE	·	SOURCE ORGANISM	KEYWORDS	ACCESSION VERSION	ATTAIAAH LOCUS DEFINITION	RESIII.T 13	A 46		Q p	Q DB		4g 4g				Qy Db	& B	P 8	Db	) B	OV D	! છુ	DЪ
Nucleotide s	1 (bases 7402 to 8783) Bonnard, G., Tinland, B., Paulus, F., Szegedi, E. and Otten, L		Agrobacterium tumefaciens (Rhizobium radiobacter) Agrobacterium tumefaciens	<pre>iaaH gene; iaaM gene; indoleacetamid isopentenyl transferase; tryptophane</pre>	TA-iaaM, T-ipt and T-6 genes. X56185 X56185.1 GI:39133	ATTAIAAH 10200 bp DNA linear BCT 06-JUL-2002 N A.tumefaciens Tm4 Ti plasmid DNA with TA-iaaH interrupted by IS866,		1800 GA 1801    3895 GA 3896	3=	3775 GTCAAAACTCTTTCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG 3834 1740 TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799	3715 TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC 3774 1680 GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG 1739	TACCAATATTTTTCAGGCACCAGTGAACCCAAGCGGTTGATAACAGCCATATGACAGGATC	1560 TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATCGA 1619	95 TGAGAAGGAAAAATAAAGATAAAGCCTTAAGAGCGGGATATCTGAACTTTATGA	35		3415 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCTCTTGGTTGG	1320 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA 1379	60 ACATGGAGTITTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG	3296 GAGTCCTTCTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA 3355	36 TCAGGAGACATTAGGCGGGCTCATGACTGCCAAACTTGGCTGAACCGTTTCGGGAGG	3176 GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGTTACTCAAGCCTTGAAA 3235 1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAAG 1200	81 GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA	

```
REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (03-DEC-1990) (
MOLECULAIRE DES, PLANTES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bonnard, G., Vincent, F. and Otten, L.
Sequence of Agrobacterium tumefaciens biotype III auxin
Plant Mol. Biol. 16 (4), 733-738 (1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     III Agrobacterium strain
Mol. Gen. Genet. 216 (2-3), 428-438 (1989)
89313683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRASBOURG CEDEX, FRANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bonnard, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91329707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2546041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 10200)
                                                                                                                                                                                                                                                                                                                                   /codon_start=1
/transT_table=11
/product="tryptophane monooxyg
/protein_id="CAA39646.1"
/db_xref="GI:39134"
/db_xref="SWISS-PROT:P25017"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="TA-iaaH"
/codon_start=1
/transl_table=11
                                                                                                                                                                         /translation="MSASSLLDKQCDHFSTKIVDLIMVDKADELDRRVAAAFSEREAS RERRISQISGECNAGLACKRLADGRFPEISAGQRVAVLSAYIYVGEEILRWLLEPEAS VRTRVSGLVAIDLAPSCHDISRAGLLQTMNLLSGKRCAPSDLSHFVAISISETARSRT LQMAPYEEGSLKSVTGFTVIIEEAVPFDMVAYGRNLMLKASAGSFPTIDLLYDYRFLDKCSDSGRIGFFPEDVERPKVAVIGAGISGLVVASELLHAGVDDVTIYEAGDRVGGKLWSHAFKDAPGVVAEMGAMRFPPAASCLFFFLERYGLSMRPFPNPGTVDTDLVYEGCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4485.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="indoleacetamide hydrolase"
/product="indoleacetamide hydrolase"
/protein id="CAA39649.1"
/db_xref="GI:39137"
/db_xref="GI:39137"
/db_xref="GI:39137"
/translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCEAAKALNALLAT
/translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCEAAKALNALLAT
/bwGGLRRAKKLDRHGNAGVGLRGIPLCFKANIATGIFPTPATPALLNHLPKIPSRI
AERLFSAGALPGASVRLPAALCGVGFRPTLGRKYPDRIIPVSFTRDTAGIIAQCVADV
VILDQVISGRPARILPIPLKGLRIGLPTTYFYDDLDADVAFAAETTIRLLANRGVTFV
                     YMWKAGQQPPKLFHRVYSGWHAFLKDGFLEGDIVLASPDAITEALKSGDIRRAHDSWQ IMLARFGRESFSSAIERIFLGTHPPGGETWSPHDWDLFKLMGIGSGGFGPVPFESGFT EILRLVINGFSKESENDRMCSEGISELSELPRRIASQVVNGVSVGPHRVQVVAIEKEKKIKIK IRLKSGISELYDKVVVTSGLANIQLRHCLTCDTTIFRAPVNQAVDNSHMTGSSKLFLLITERKFWFDHMLPSCVLMDGFAKAVYCLDYBPQDDNGKGLVLISYTWEDDSHKLLAVPDKKKERLCLLRDAISKSFPVFAQHLVPACADYDQNVVQHDWLTDENAGGRFKLNRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /insertion
3370. .3377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VNAQIDGHQISNAEYELARQSFRPRLQAAYRNYFRLYRLDAILFPTAPLAAKAIGQDS
SVIHNGSMVNTFKIYVRNVDPSSNAGLPGLSLPVGLTPDRLPVGMEIDGLAGSDHRLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EADIPHLEDLNSGASLPIALYEFPHALKQYLDDFVGTVSFSSFSDVIKEIRSPDVANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AIGAALEKAINFRSFPDVLN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (join (192.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (join(192.
YSEELFFQALDTTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1657. .6924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="Ssp I junction site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'gene="TA-iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:358"
/plasmid="Ti"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="TA-iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'gene="TA-iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                strain="Tm4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .4490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _seq="IS866"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G. Bonnard, INSTITUT DE BIOLOGIE
S DU CNRS, 12 RUE DU GENERAL ZIMMER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .653,3369.
                                                                                                                                                                                                                                                                                                                                                                                                               monooxygenase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .4319))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .4319))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genes
```

```
BASE CO
                        Ş
                                                                  밁
                                                                                                  S
                                                                                                                                       밁
                                                                                                                                                                  S
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Sim
Matches 1606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gg
5197
                                                                  5137
                                                                                                                                        5077
                                                                                                                                                                                                             5017
                                                                                                                                                                                                                                                                                 4957
                                                                                                                                                                                                                                                                                                                                                        4897
                                                                                                                                                                                                                                                                                                                                                                                                                          4837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4657
                               541
                                                                                                     481
                                                                                                                                                                        421
                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                         CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480
                                                                                                                                                                                                                                 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420
                                                                                                                                                                                                                                                                                                      CCTTGGGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240
ATTGAAGAGCAGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAAGCC 5256
                                                                                                                                                                                                                                                                                   GCTTCGGTGCGAACAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATCTTGCATG
                                                                                                                                                                                                                                                                                                                                                        GTCCTCTCCGCTTACATCTATGTTGGCGAGGAAATTCTGAGGTGGATACTCGAACCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCGGAGATATCAGCCGGTCAGAGGGTCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGATAATGGTCGACAAGGCTGATGAGTTGGACCGCCGCGCTTGCCGCAGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTCAGCCTCATCTTTCTTGATAAACAATGCGATCATTTCTCTACCAAAATTGTGGAT 4716
                           CTTGAAGGGGCCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                    CTGCAAATGGCGCCGTACGAAGAAGGCTCGTTGAAAAAGCGTTACCGGGTTTACCGTAATC
                                                                                                       CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                        CCCAGCGACCTTAGTCATTTCGTGGCCATTTCAATCTCTGAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                             GATATTTCCAGAGCTCAACTTCTCCAAACCATGAATTTGCTGAGTGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                            GTTCTCTCCGCTTATATCTTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGCTTCGAGGGAAAGAAGAATTAGTCAAATTTCCGGCGAGTGCAACGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MTVANWQVRDFTRILNAGELQGRLEQARTDFGALLAEIVYFHPP GATPEGDDEYLLTGQGLVYVYLSEQTARQCALMRLLESNSSNEGTVVTAIPPWLMDT QTLNLTLQERCDQGGIVNYYHGSRTNEFFLAIMLSNCFVRFGTDEINGASYGFYARRG NYTEEGEDDNREIGDEGEAGGAEIRDYQFGDLVNYPIVALGSSRLSA"

2771 c 2709 g 2584 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="T-ipt"
7613. .8335
/gene="T-ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MDLRLIFGPTCTGKTSTAIALAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVBELKGTTRLYLDDRPLVKGIIAAEQAHERLIABVANYSAHGGLILEGGSISL
LKCMAQSGYWSADFRWHIIHIKLADEETFMKAAKARVKQMLCPAIGPSLIGLLYLW
EPRLRPILKEIDGYRYAMLFASQNRITPDMLLQLDADMEGKLIHGIAQEYLIHARRQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/trans1_table=11
/proteim_id="CAR39648.1"
/db_xref="GI:39136"
/db_xref="SWISS-PROT:P25019"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/trans1_table=11
/product='n'isopenteny1 transferase"
/protein_id="CAA39647.1"
/db_xref="GI:39135"
/db_xref="SWISS-PROT:P25018"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (9013.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (9013.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HEFPPVSAAAFEGFEGPPFGAY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="T-6b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene≈"T-6b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.5%;
89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1467.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .9636)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                               600
                                                                  5196
                                                                                                     540
                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                        4956
                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                             5076
                                                                                                                                                                                                                                                                                   5016
                                                                                                                                                                                                                                                                                                                                                                                                                            4896
                                                                                                                                       5136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

á

밁

```
5857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5257
                                                                                                                                                                                                                                                                                                                             1380
                                                                                                                                                                                                                                                                                                                                                                 5976
                                                                                                                                                                                                                                                                                                                                                                                                     1320
                                                                                                                                                                                                                                                                                                                                                                                                                                             5917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5437
                                                                                                                                 6156
                                                                                                                                                                     1500
                                                                                                                                                                                                                                                   1440
                                                                                                                                                                                                                                                                                       6036
                                                                                                                                                                                                           9609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGGCATATGACAGGATC
                                                                                                                                                         TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                 TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                             TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                           ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGG-TAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGGGGACATTAGGCGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGCTTGTTTTTCTTCCAGGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAAGGACGCTCCGGGCGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACGATGTTACAATATATGAAGCAGGTGATCGGGTTGGAGGTAAGCTTTGGTCACATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCATTGGGGCTGGCATTTCCGGGCTCGTGGTGGCAAGCGAACTGCTTCATGCTGGCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTCCGATAGTGGGCGGATCGGCTTCTTTCCGGAAGATGTTCCCAGGCCAAAAAGTAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                           TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                 CGAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCAGAACTTTATGA
                                                                                                                                                                                                                                                                                         TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCTC
                                                                                                                                                                                                                                                                                                                                                                   GTTTGGTCCAGTTTTTGAAAGCGGGTTTACTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                       GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCGTTCTCCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTTCCTTGAGGGAGATATTGTGTTTGGCGTCGCCTGATGCTATCACTGAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGCCACCGAAGTTGTTCCATCGCGTTTACAGCGGGTGGCATGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCGGCACAGTCGACTGGACTTGGTCTACGAGGGTTGCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGTGCTTGTTTTTCTTCCTCGAGCGATACGGTCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                             TCAAGTGGTTAACGGTGTGTCAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
             1679
                                                                                                                                                                       1559
                                                                                                                                                                                                                                                 1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5316
                                                                                             1619
                                                                                                                                                                                                             6155
                                                                                                                                                                                                                                                                                                                               1439
                                                                                                                                                                                                                                                                                                                                                                                                       1379
                                                                                                                                                                                                                                                                                                                                                                                                                                             5975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5376
                                                       6275
                                                                                                                                   6215
                                                                                                                                                                                                                                                                                         6095
                                                                                                                                                                                                                                                                                                                                                                     6035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
```

밁

5

ঠ

밁

밁

중 유

S

음 중 음

중 음 중

음 성 음 성 음 성

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
AVU83987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                       gene
                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AVU83987

Agrobacterium vitis plasmid pTiTm4 agrocinopine synthase and (5) genes, (iaaH) pseudogene, and (iaaM), (ipt), (6b) and (ocs) genes, complete cds.

U83987.1 GI:1814322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (07-JAN-1997) Institute du General Zimmer 12, Strasbourg (Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Otten, L. and De Ruffray, P. Sequence and functional analy T-DNA of Agrobacterium vitis Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agrobacterium vitis (Rhizobium vitis)
Agrobacterium vitis
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Otten, L. and De Ruffray, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTTGGTTTGACCATATGCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 15463)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 15463)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1801
/transl_table=11
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/protein_id="AAB41872.1"
/db_xref="GI:1814323"
/db_xref="GI:1814323"
/translation="meGTAMPAWTLHWDLPENVTPPEVLARHSVPKLLERLEENLPLO
VIEHRGMFNIGNRIQECTASSLLAALGQGGRNLSELDVCLTSDNIPVVSHDLNTWRVS
EKLGDKFFNEIHSSDINNVPVIIREVSNGIIOPRYRETIDHIPLDEILGKVFSANPD
ATIFLDGRNYEAHVIVAMLSHRPVYJGRAVVLFYTFEYPDGGAFVDAVLTAQPASDWR
KSIALMPALFPEELCRLARLRQVSEPTVDDLYLAGKAWIDSLLMQDMRVVAVHVVFSE
VSRNLLDRVVDKDVLLAFDSDQAAVRLAHYVKEDTMIKAKRPHLKFAAVTRCYDFAAL
LNGGERAEFSIDINTGRARPHETDERKHIRWRKGTPGNSATIADWVISDRSEDEMAIW
EWRNQGIDREVSHLSPHLDVDVGTSE"
2235...2918
                                                                                                                                                                                                                                                                                           139. .165
/note="flanking repeat;
complement(373. .1629)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:373"
/plasmid="pTiTm4"
3857. .6588
                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/db_xref="taxon:373"
/insertion_seq="IS867"
139. .15310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /insertion_seq="IS866"
15438. .>15463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Agrobacterium
/mol_type="genomic DNA"
/db_xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Agrobacterium vitis"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="genomic
/strain="Tm4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Agrobacterium"
                                                                                                                                                                                                                                                                                                                                                      note="shoot-inducing octopine T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .15463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              analysis of the shoot-inducing vitis strain CG474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e for Plant Mo
67084, France
                                                                                                                                                                                                                                                                                                                  left border of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vitis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plant Molecular Biology,
                                                                                                                                                                                                                                                                                                                    T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1799
```

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
/transl_table=1
3857...3864
                                                                                                                                                                                               /gene="ipt"
/codon_start=1
/codon_start=1
/trans1_table=11
/trans1_table=11
/protein_id="AAB41875.1"
/protein_id="AAB41875.1"
/db_xref="G1:181326"
/db_xref="G1:1811326"
/trans1aton="MDLFLIFGPTCTGKTSTA1ALAQQTGLPVLSLDRVQCCPQLSTG
/trans1aton="MDLFLIFGPTLYLDDRPLVKGIIAAEQAHERLIAEVYNYEAHGGLILEGGSISL
LKCMAQSGYWSADFRWHIIRHKLADEETFMKAAKARVKQMLCPAIGPSLIQELVYLWN
EPRLERPIKESLDGYRYAMLFASQNRITPDMLLQLDADMEGKLIHGIAQEYLIHARRQE
HEFPPVSAAAFEGFEGPPFGAY"
                                                                                                                                                                                                                                                                                                                                                                                             /gene="ipt"
10824. .1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /Godon_start=1
/trans1 table=11
/protein_id="An841874.1"
/protein_id="An841874.1"
/db_xref="GI:1814325"
/trans1ation="MSASSLLDKQCDHFSTKIVDLIMVDKADELDRRVAAAFSERAS
/trans1ation="MSASSLLDKQCDHFSTKIVDLIMVDKADELLRHILEPEAS
/trans1ation="MSASSLLDKQCDHFSTKIVDLIMVDKADILHERIARILEPEAS
/trans1ation="MSASSLLDKQCDHFSTKIVDLIMVZGEBILRWILEPEAS
/trans1ation="MSASSLLDKQCDHFSTKIVDLIMVZGEBILRWILEPEAS
/trans2015GECNAGLACKRLADGRPEPISAGQRVAVLSAYIVGEBEILRWILEPEAS
/trans2015GECNAGLACKRLADGRPEPISAGGRPTIDLLYDYRIFL
/TRANS2015GECNAGLACKRLADGRPEPITIDLLYDYRIFL
DKCSDSGRIGFFFEDVFRVAVIGAGISGLVVASELLHAGVDDVITYEAGDRVGGKL
WSHAFKDAPGVVAEMGAMRFPPAASCLFFFLERYGLSGMRPFPNDTTDLYTEGCR
/codon_start=1
/transl_table=1
/protein_id="AAB41876.1"
/protein_id="ABA41876.1"
/db_xref="d1:1814327"
/translation="MTVANWQVRDFTRILNAGELQGRLEQARTDFGALLAEIVYFHPP
/translation="MTVANWQVRDFTRILNAGELQGRLEQARTDFGALLAEIVYFHPP
GATPEEGDDEYILTGQGLVYYYLSEQTARQCALNRLLPSNSSNFGTVVTAIPPWLMDT
                                                                                                                     complement (12224.
/gene="6b"
                                                                                                                                                                             complement (12224.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YMWKAGQQPPKLFHRVYSGWHAFLKDGFLEGDIVLASPDAITEALKSGDIRRAHDSWQ
IWLMRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGDVPESGFT
IWLMRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGDVPESGFT
ELIKLVINGYEEROQRWCSGISELPRRIASQVVUNGVSVSQRIRHVQVRAIEKEKTKIK
IRLKSGISELYDKVVVTSGLANIQLRHCLTCDTTIFRAPVNQAVDNSHMTGSSKLFLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type=direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(join(3403. .3856,6589.
/gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MDHSRPIFNVIDCSHIQDRRELEIVLLATRRAYLRFAQQDLIPA
QRSWIDSIIDTNVPIDPAIDEVVKRFRSVACLPAPVGMSLNIVLNDSLMYVYCSFQEM
RRYACERFYEGFSGKGVVISTVPPYSQGITKEAMRCWQNEVCHITNNEKNDLDAYIAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLKHPWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YSEELFFQALDTTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TERKFWFDHMLPSCVLMDGFAKAVYCLDYEPQDPNGKGLVLISYTWEDDSHKLLAVPD
KKERLCLLRDAISKSFPVFAQHLVPACADYDQNVVQHDWLTDENAGGRPKLNRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insertion element
/rpt_type=direct
7868. .10135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (3403. .7530)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTSLLKRLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/transl_table=11
/protein_id="AAB41873.1"
/db_xref="GI:1814324"
                                                                                                                                                             /gene="6b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene≃"iaaM"
7868. .10135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="flanking repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="flanking repeat; left border"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18866"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="interrupted by the bacterial insertion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LPNTSLQNTSFSHVKIGGDAFLAPSRADPFCVEIVAVGKALFQDNGLKKAPKAGWSMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2235. .2918
/gene="5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'pseudo
                                                                                                                                                                                                                                                                                                                                                                                                                                    .11546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _table≃11
                                                                                                                                                                                                                                                                                                                                                                                             11546
                                                                                                                                                                               .12847)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            right border
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .7530))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the IS866 insertion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            element
                                δ
                                                                                밁
                                                                                                                   á
                                                                                                                                                           밁
                                                                                                                                                                                       δ
                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Simi
Matches 1606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sg
                                                                                8468
                                                                                                                                                           8408
                                                                                                                                                                                                                                        8348
                                                                                                                                                                                                                                                                                                                   8288
                                                                                                                                                                                                                                                                                                                                                                                             8228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7928
                                          661
                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
      TGTTCCGATAGTGGGCGGATCGGCTTCTTTCCGGAAGATGTTCCCAGGCCAAAAGTAGCG
                                                                                                                                                           ATTGAAGAGGCAGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCCTCTCCGCTTACATCTATGTTGGCGAAGGAAATTCTGAGGTGGATACTCGAACCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15287. .15310
/note="flanking repeat; right border
a 3665 c 3902 g 4023 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRGLSSLNLGGANANAI VRALNGV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /transl_table=11
/protein_id="AAB41877.1"
/db_xref="GI:1814328"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(13779.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (13779.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81.5%;
89.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1467.6; DB 1;
Pred. No. 0;
0; Mismatches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .14855)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ę,
```

```
QTLNLTLQERCDQGGI VNYYHGSRTNEFFLAIMLSNCFVRFGTDE INGASYGFYARRG
NYTEEGEDDDNE I GDEGEAGGAE I RDYQFGDL VNYP I VALGSSRLSA"
```

/translation="MAKVAILGAGNLALTLAGDLARRLGQTPSIWAPISNRSSFNDVRCLGSLELVGPDYGGDPQPRLEDDLGTAISGAAFIFLTVPTLGQGGILGELAKFNLSNSVLVALPGSATSLACKQTLVPTFAPIAVIESTFYPACRKVLMLGVKAVUMLGVKATFEVATTQPLSEBVKGREVLFPPQWYQHPASIFFSNTNPVAHPAGILAARDSIEGGILPVPKFYRQFVPQAITRVIAIDEERLSIVDALGLESETDFSYSKKWYGGHACNAREFYETYEGYRGFVPQAITRVIAIDEERLSIVDALGLESETDFSYSKKWYGGHACNAREFYETYEGYREISTPKTWHKITTEDVKHILLVMVEIAEAIGVQVPEMKSVVQEASDVLNENLLRT

the T-DNA"

7868 ATGTCAGCCTCATCTTCTTGATAAACAATGCGATCATTTCTCTACCAAAATTGTGGAT Indels 15463; 2 Gaps 7927 60

CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCA CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA CTGATAATGGTCGACAAGGCTGATGAGTTGGACCGCCGCGTTGCCGCAGCCTTCTCAGAA CGAGAAGCTTCGAGGGAAAGAAGTTAGTCAAATTTCCGGCGAGTGCAACGCTGGGTTA 8047 180 7987 120 240

GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCGGAGATATCAGCCGGTCAGAGGGTCGCA 300 8107

CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG GCTTCGGTGCGAACAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATCTTGCATG

8167

GATATTTCCAGAGCTCAACTTCTCCAAACCATGAATTTGCTGAGTGGTAAAAGATGTGCA GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAAGATGTGCA

420 8227 360

CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC 8287 480

CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC CCCAGCGACCTTAGTCATTTCGTGGCCATTTCAATCTCTGAGACTGCCCGCTCCCGAACC 8347 540

CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600 CTGCAAATGGCGCCGTACGAAGAAGGCTCGTTGAAAAGCGTTACCCGGGTTTACCGTAATC 8467 8407

TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA TTCCAACGATCGACTTGCTCTATGACTACAGATTGTTTCTCGACAAA 8527 8587 720 660

Sgo

```
1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8588
                                                                                                                                                                                         1680
                                                                                                                                                                                                                                                                                                  1620
                                                                                                                                                                                                                                                                                                                                                                                                        1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                   1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                            TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                   GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                               TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGAAAATCAGCGGATGTGCCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGG-TAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGGGGACATTAGGCGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCAGCCACCGAAGTTGTTCCATCGCGTTTACAGCGGGTGGCATGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGCACAGTCGACTGGACTTGGTCTACGAGGGTTTGCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCGTGCTTGTTTTTCTTCCTCGAGCGATACGGTCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGCTTGTTTTTCCTTCCAGGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCAAGGACGCTCCGGGCGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGATGTTACAATATATGAAGCAGGTGATCGGGTTGGAGGTAAGCTTTGGTCACATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCATTGGGGCTGGCATTTCCGGGGCTCGTGGCGAAGCGAACTGCTTCATGCTGGCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                 TGTCCTCATGGACGGGTTCGCAAAAGCAGTCTATTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCACATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                           TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCAGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAAGTGGTTAACGGTGTGTCAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTTGGTCCAGTTTTTGAAAGCGGGTTTACTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTCGTTCTCCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTTTCCTTGAGGGAGATATTGTGTTGGGCGTCGCCTGATGCTATCACTGAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                         TGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                            1739
                                                                                                                                                                                                                                                                                                  1679
                                                                                                                                                                                                                                                                                                                                                                                                           1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8707
                                                                                                                                       9606
                                                                                                                                                                                                                                                9546
                                                                                                                                                                                                                                                                                                                                                         9486
                                                                                                                                                                                                                                                                                                                                                                                                                                                             9426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
AVU83986
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                         gene
                                                                                                                                          Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AVU83986 DNA 14960 bp DNA Agrobacterium vitis plasmid pTiCG474 agrociand (iaaH) genes, (iaaM) pseudogene, (ipt) (ocs) pseudogene, complete cds. U83986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (07-JAN-1997) Institute for Plant Molecular Biology, rue
du General Zimmer 12, Strasbourg 67084, France
Location/Qualifiers
1. .14960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Otten, L. and De Ruffray, P. Sequence and functional analy T-DNA of Agrobacterium vitis Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium vitis (Rhizobium vitis)
Agrobacterium vitis
Bacteria; Proteobacteria; Alphaproteobacteria;
Rhizobiaceae; Rhizobium/Agrobacterium group; Aç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Otten, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U83986.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 14960)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 14960)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9668
2363. .3046

/gene="5"

2363. .3046

/gene="5"

/codon_start=1

/transT_table=11

/transT_table=11

/protein_id="ABB41867.1"

/db_xref="GI:1814317"
                                                                                                                                                                                                                                                                                                                     /codon start=1
/transl_table=11
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/protein_id="Agrocinopine synthase"
/translation="MALNVRYLYILLTMTCHNIPFFFAQVLCQRKPHKVEGTVWPAWT
/translation="MALNVRYLYILLTMTCHNIPFFFAQVLCQRKPHKVEGTVWPAWT
/translation="MALNVRYLYILLTMTCHNIPFFAQVLCQRKPHKVEGTVWPAWT
/translation="MALNVRYLYILLTMTCHNIPFFAQVLCQRKPHKVEGTVWPAMT
/translation="MALNVRYLYILLTMTCHNIPFFAQVLCQRKPHKVEGTVWPAMT
/translation="MALNVRYLYILLTMTCHNIPFFAQVLTMTChnippm"
/translation="MALNVRYLYILLTMTChnippm"
/translation="MALNVRYLYILLTMTChnippm"
/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and De Ruffray, P.
                                                                                                                                                                                                                                           EPTVDDLYLAGKAWIDSMLMQDMRIVAÄHVVFSGVTRNLLGQVVDKDVLLAFDSDEAA
VRLAYYVKEDTMIRAKRPHLKFAAVTRCYDFAALLDCGERGEFSIDIKTGRARRHETD
ERKHIRWRKGTPGNSATIADMVISDRPEDEMAIWEWRNQGIDREVSHLSPHLDVSVET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_type=direct complement(496. .1854)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Agrobacterium vitis"
/mol_type="genomic DNA"
/db_xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="shoot-inducing octopine T-DNA"
252. .278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /insertion_seq="IS869"
252. .14745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Agrobacterium vitis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11921.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:373"
/plasmid="pTiCG474"
7244. .8395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Agrobacterium
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="genomic DNA"
/db_xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insertion_seq="IS870-like insertion element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="CG474"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:1814315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ysis of the shoot-inducing strain CG474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      left
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agrocinopine synthase, (ipt) and (6b) genes, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      border
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      о
Е
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a; Rhizobiales;
Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BCT 02-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
```

유

유상

 B 8 B 8 B 8 B 8 B

8 8 8 8 8 8 8 8

음 성 음 성 음 **성** 

음 성

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                      gene
                                                       SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                     repeat_region
complement(10816.
/gene="6b"
/codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                             /transl_table=11
/protein_id="AAB41869.1"
/protein_id="AAB41869.1"
/db_xref="Gi:1814319"
/db_xref="Gi:1814319"
/txanslation="MRIMCMRTGVSFTVSPTDHQRLMALTRDRNAPQKHVWRSEIILL
/txanslation="MRIMCMRTGVSFTVSPTDHQRLMKTRPSRIVRLGNDVAERVV
ARRLLIRRARRQHWTADMMATVAGISASAVRRIWKAHGLAPHRWRQFKLSNDDKFVTVL
ARRLLIRRARRQHWTADMMATVAGISASAVRRIWKAHGLAPHRWKGRLCTMTHBYKKHGTTTL
LEDVUGLYUDPPAHAIVLSVDEKSQIQALDRTQPGLPMKKGRLCTMTHBYKKHGTTTL
FAALNVLDGTVIGCNMQRHRHQEFIRFLKRINAQAPDDKSVHVILDNYAAHKHPKVRA
WLERHERFTFHTSCSWLNAVEGFFARLSKRRLKRGVFHSVVDLQAAINRFLVEHN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="ORF1"
7301. .8395
/gene="ORF1"
/codon_start=1
/transl_table=1
                                                                                                                                                                                                                                                                             /gene="i,
                                                                                                    EPRLRPILKEIDGYRYAMLFASONQITFDMLLQLDPDMEGELIHGIAQEYLIHARRQE
QEFPPVSVVAFEGFEGPPFGMC"
                                                                                                                                   /translation="MDLRLIFGPTCTGKTSTAIRLAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVEELKGTTRLYLEDRPLVKGIIAAKQAHERLIGEVYNYEAHGGLILEGGSISL
LRCWAQSSYWSTDFRWHIIRKLADEETFMNAAKARVRQMLRPAVGPSIIQELVHLWN
                                                                                                                                                                                                                                                   9419. .10141
/gene="ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MVSITSLAQSLEHLERKDYSCLELVETLIARCEAAKSLNALLAT
DWDGLERSAKKIDRHGNAGVGLCGIPLCFKANIATGVFPTSAATPALINHLPKIPSRV
AERLFSAGALFGASGNNHELS FGITSNNYATGAVRNPWNPSLISGGSSGGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRPTLGRYPRDRIPPUSPTRDTAGIIAQCVADV
IILDQVISGREARILFIPLKGLRIGLPTYFYDDLDADVAFAAETTIRLLANRCVTFV
EADIPHLEDXXXGASLPIALYEFPHALKQYLDDFVGTVSFSDVINGIRSDDVANIVKA
QVDGHQISSDEYELAAQSFRPRLQATYRNYFRLYQLDAILFFTAPLAAKAIGQDFSVT
                                                                                                                                                                                   /codon_start=1
/transl_table=11
/protein_id="AAB41870.1"
/db_xref="GI:1814320"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               / translation="MYHSRPIPNVIDSSNIHGRRELKLFLRHVEIAYRSPAQRDLIRA
QRSLINSIINIDVPIDPAIDEVVNRFCEVACLQOPAGIIVIIINDSLMYVYCSFREM
RRXAHKRLYDGVSDGSVVISTVPPYTEGIRKETMRSWQNWVGENTSDEIHNUDAYIAF
LPTTSLQNPSVSHMKIRCNSFLAPSRVDPFCVEIIAVGKALFEDNGLKKKPKLWGEMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="iaaM"
'noto:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (3569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (3569.
                                                                   /gene="6b"
                                                                                                                                                                                                                                                                                                                                      insertion element"
                                                                                                                                                                                                                                                                                                                                                    /note="flanking repeat; right border of the IS870-like
                                                                                                                                                                                                                                                                                                                                                                                        KKPKPFTWTADPDKIIAAVKRGHQALDSIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=direct
7301. .8395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="interrupted by a bacterial IS870-like insertion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ralekaidihlepnvln"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HNGSTMNTFKIYVRNVDPSSNAGLPGLSLPVHLTPHRLPVGMEIDGLAGSDHRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nsertion element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transl_table=11
/protein_id="AAB41868.1"
/db_xref="GI:1814318"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'gene="iaaH"
                                                                                                                                                                                                                                                                                                              _type=direct
                                                                                    ement (10816.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .4972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .4972)
                                                                                      11439)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .8720)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           left
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           border
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IS870-like
                                                   밁
                                                                                 Ś
                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                 S
                                                                                                                   밁
                                                                                                                                             á
                                                                                                                                                                                 В
                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 1604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5306
                                                     5966
                                                                                                                     5906
                                                                                                                                                                                     5846
                                                                                                                                                                                                                                                     5786
                                                                                                                                                                                                                                                                                                                     5726
                                                                                                                                                                                                                                                                                                                                                                                      5666
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5366
                    721
                                                                                                                                                    601
                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
```

```
repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTCTCCAGAGCACAACTTCTCCAAATTCTGAATTTGCTGAGCGGCAAAAGATATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTGGGCGGGCAACAGTGAGTGAGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCCTCCCCGTTTACATCTATGCTGGCGAGGAAATTTTTGGGCCGGATACTCGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTCTCCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCCGGATACTTGAATCGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGCAAAAGGCTGGCCGATGGTCGCTTTCCCGGAGATCTCAGCCGGTGAGATGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGATAATGGTCGATAAGCCTGATGAGTTGGGCCGCCGGGGTTGCGGATGCCTTCTCAGAG 5425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTCCGATAGCGGTCGGATCGGCTTCTTCCCGGAAGGTGTTCCTAAGCCGAAAGTAGCG
                                                                                                                      TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                              TCGGCAGCTTCCTTTCCAACGATCGACTTGCTCTACGACTACAGATCGTTTTTTGATCAT
                                                                                                                                                                                                                                                TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA 660
                                                                                                                                                                                                                                                                                                                                                         CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                        CTGCAAATGGCGCCGTACGAGAACGGCACGTTGAAACGCGTTACTGGGTTTGCCATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGCGACCTTAGTCATTTCCTGGCCATTTCAATTTCTGAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATGGGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACGTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGAATCTTCTAGGGCAATGAGAATTACTCAAATTTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCACCTTCAGCTCTTCTTGATATCCAATGCGATCATTTCTCTACCAAAATGGTGGAT 5365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                рJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/transI_table=11
14719. .14745
/note="flanking repeat; right border of the T-DNA"
/rpt_type=direct
/rpt_type=direct
1 3510 c 3632 g 3958 t 6 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="AAB41871.1"
/db_xref="GI:1814321"
/db_xref="GI:1814321"
/translation="MTVAANQVRDLTLILSAGEIQSRLEQARTDFGALLGDIVYFQPS
VISLGEFDDRYIFSGGELVYYVLREDIARQCALRRNLPSNSSNFGIVATAIPPWLMNA
HGLNQVLLQRCDPGGLVNYYQGPHTNQFFLAIMRSNCFVRFASDVINNESYGFYARGG
NYTEBAGGGDDEVDDEGEAGAAATTESQIGNLINYPIVALGSCQLSA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (13214.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (13214. .14290)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'pseudo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'gene≂"ocs"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81.3%;
89.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1464.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 14960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                     6025
                                                                                                                                                                                              5965
                                                                                                                                                                                                                                                                                                     5905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5545
                                                                                                                                                                                                                                                                                                                                                                                                        5845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                          720
```

	1800 GA 1801 
1799 7104	740 TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCG
1739 7044	680 GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTV
1679 6984	620 TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTG
1619 6924	560 TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
1559 6864	500 TCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTAT 
1499 6804	440 TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGC
1439 6744	380 TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGC
1379 6684	O GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACG
1319 6624	1260 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGATAGGATCTGGCGGG
1259 6565	1 GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT
1200	8=8
1140 6445	1081 GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
1080 6385	021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGT
1020 6325	TCTAC
960 6265	01 TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCL
900	TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTG
840 6145	1 GACGATGTTACAATATATGAAGCAAGTGATGGTGTGGAGGCAAGCTTTGGTCACATGCT
6085	TIGGCATTTCCGGGCTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA

8 8 8 8

á

Search completed: November 24, 2003, 01:37:14 Job time : 6650.53 secs

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N_Geneseq_19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-434-837-10_COPY_1_1801
1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      November 23, 2003, 19:28:25; Search time 476.254 Seconds (without alignments)
10208.191 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atgtcagcttcacctctcct.....ctatgagtcgcaggatccga 1801
                                                       /SIDSI/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
/SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6 (c) 1993 - 2003 Compus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5105512
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

c 8	c 7	6	<sub>υ</sub>	4	ω	N	ם	Result No.
1600.4	1600.4	1697.4	1762	1765.2	1788	1788	1801	Score
88.9	88.9	94.2	97.8	98.0	99.3	99.3	100.0	% Query Match
7208	6112	2211	24593	24596	2544	1807	2268	% Query Match Length DB
18	18	20	0	o	21	21	21	BB .
AAT48870	AAT48868	AAV69756	AAN50226	AAN50182	AAD00626	AAD00625	AAD00617	ID
IamH expression ve	IamS expression ve	Tryptophan oxygena	Sequence of opine	Complete nucleotid	Agrobacterium tume	Agrobacterium tume	Agrobacterium tume	Description

## ALIGNMENTS

AAD00617 standard; DNA; 2268 BP.

```
RESULT 1
AAD00617
ID AADC
XX
iaaM; iaaH; ipt; T-DNA; transferred DNA; gall-disease resistance; BR;
bacterial resistance construct; untranslatable RNA; tumour; oncogene;
auxin; plant growth hormone; ds.
                 WPI; 2000-365599/31.
                                  Ream W,
                                                                      05-NOV-1998;
                                                                                        04-NOV-1999;
                                                                                                          11-MAY-2000.
                                                                                                                                             Agrobacterium tumefaciens.
                                                                                                                                                                                                                    29-AUG-2000 (first entry)
                                                                                                                                                                                                                                      AAD00617;
                                                    (UYOR-) UNIV OREGON STATE.
                                                                                                                            WO200026346-A1.
                                                                                                                                                                                                 Agrobacterium tumefaciens T-DNA gene, iaaM
                                  Mok MC,
                                                                      98US-0107185
                                                                                        99WO-US26100
                                  Lee H;
```

Gall resistant plants generated by transforming cells with

an

FFX@XDDDDDDDDDDDDXQ

```
Query Match
Best Local Simi
Matches 1801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium infection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaM, iaaH and lpt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium tumefaciens T-DNA (transferred DNA) gene iaaM, required for auxin production. It encodes an enzyme that converts tryptophan into indole acetamide, essential for auxin synthesis. The overproduction of these plant growth hormones results in gall formation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     untranslatable nucleic acid homologous to a gall disease-causing
                    199
                                                  661
                                                                                  601
                                                                                                                 601
                                                                                                                                                   541
                                                                                                                                                                                541
                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                      TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                  TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                    CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTTACCATAACC
                                                                                                                                                                                                                                                                                  CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTGGGCGCGGCCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2268 BP;
                                                                                                                                                   CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         520 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1801;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G; 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                  720
                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                  660
                                                                                                                   660
                                                                                                                                                   600
                                                                                                                                                                                   600
                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A A
á
                           В
                                                           Ś
                                                                                                밁
                                                                                                                        Ś
                                                                                                                                                        В
                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                       Ϋ́
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1321
     1801
                                                                                                                                                                                                                                  1561
                                                                                                                                                                                                                                                                 1561
                                                                                                                                                                                                                                                                                                 1501
                                                                                                                                                                                                                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                                                                                                                              1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                     1681
                                                                                                                                                                  1621
                                                                                                                                                                                                  1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                    1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                 GAAGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGTCCTTCTCTCAGGGATAGAGAGGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGATGTTACAATATATGAAGCAAGTGATCGTGTTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCATTGGCGCTGGCATTTCCGGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                   GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                      GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                                                                   TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                      TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                                                                    ACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCG
                                                                                                                                                                                      ACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCCATATGACAGGATCG
                                                                                                                                                                                                                                  AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                        AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                                                                                                CAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGAT
                                                                                                                                                                                                                                                                                                                                                                GAAGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1440
                                                                   1800
                                                                                                                                                                                                  1680
                                                                                                                                                                                                                                                                                                                                 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                     1800
                                                                                                     1740
                                                                                                                                                                    1680
                                                                                                                                                                                                                                    1620
                                                                                                                                                                                                                                                                                                   1560
                                                                                                                                                                                                                                                                                                                                                                 1500
                                                                                                                                                                                                                                                                                                                                                                                                1500
                                                                                                                                                                                                                                                                                                                                                                                                                                1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
```

용 S 8 S 밁 ઇ 문 Ś 밁 5 밁 S 밁 S 밁 S 밁 ঠ 밁 Ş 밁 S В S

```
RESULT 2
AADOOS 25
ID AADO
XX AADO
XX AADO
XX AADO
XX Isalv
XX Isalv
XX Isalv
XX WO2(
XX WDI)
XX WPI
XX Exar
XX E
                                                     ঠ
                                                                                                                                       ð
                                                                                                        ₽
                                                                                                                                                                               밁
                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 1788; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                  The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium infection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaW, iaaH and ipt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium cumefaciens T-DNA (transferred DNA) mutant iaaM gene. This oncogene was modified by introduction of a stop sequence (TGA) at the third codon and deletion of two bases following the third codon. This sequence was used for the construction of double stranded RNA and untranslatable dsRNA vectors, that reduce gall formation in transformed plant cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gall resistant plants generated by transforming cells with an untranslatable nucleic acid homologous to a gall disease-causing
                                                                                                                                                                                                                                                                                                                                                                 Sequence 1807 BP; 428 A; 418 C; 486 G; 475 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              iaaM; iaaH; ipt; T-DNA; transferred DNA; gall-disease resistance; BR;
bacterial resistance construct; untranslatable RNA; tumour; oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200026346-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium tumefaciens T-DNA mutant iaaM gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAD00625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAD00625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYOR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1801
                                                                132
                                                                                                          78
                                                                                                                                                                                             18
                                                                                                                                                                                                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plant growth hormone; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNIV OREGON STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . Å 1801
                                                TAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGGTTAGCTTGCAAAAG
                                                                                                                              CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                     ACCTCTCGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
                        TAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG
                                                                                                                                                                                          ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mok MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard; DNA; 1807
                                                                                                        CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 43-44; 49pp; English.
                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0107185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US26100
                                                                                                                                                                                                                                                                        100.0%; F1
                                                                                                                                                                                                                                                                                                 99.3%; Score 1788;
100.0%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                             ,
,
                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                       1807;
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                              191
                                                                                                        137
                                                                                                                                                  131
                                                                                                                                                                                             77
                                                                                                                                                                                                                                                                             0
                                     밁
                                                                           Ş
                                                                                                                          В
                                                                                                                                                             δ
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                          1218
                                                                                                                                                                                                                                                                                                   1038
  1272
                                                                                    1212
                                                                                                                                                                      1152
                                                                                                                                                                                                                 1098
                                                                                                                                                                                                                                                           1092
                                                                                                                                                                                                                                                                                                                                             1032
                                                                                                                                                                                                                                                                                                                                                                                       978
                                                                                                                                                                                                                                                                                                                                                                                                                               972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                           GCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCCGGCACAGT
CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                  TTCAGGGATAGAGAGGATCTTTCTGGGCACACACTCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                    GCGAGATATTGTGTTTGGCCTTGTCGCCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                   GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                             GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                  CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCTTTCAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCCTGCCAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCAACAGTGAGTGGTCTCGTTGGCATCGACTTGGACACCATTTGCATGGATTTCTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC
                                        TTCAGGGATAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                            CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGGTAGACGATGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT
                                        1277
  1331
                                                                                                                          1217
                                                                                                                                                                                                                 1157
                                                                                                                                                                                                                                                           1151
                                                                                                                                                                                                                                                                                                                                             1091
                                                                                                                                                                                                                                                                                                                                                                                                                               1031
                                                                                    1271
                                                                                                                                                                      1211
                                                                                                                                                                                                                                                                                                     1097
                                                                                                                                                                                                                                                                                                                                                                                       1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
```

```
RESULT 3
AADOOG 5
ID AADOO
XX AADOO
XX AADOO
XX 100 A9TO
XX 100 A9TO
XX 100 A9TO
XX PH Ream
XX Rey
FT misc
FT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                         iaaM; iaaH; ipt; T-DNA; transferred DNA; gall-disease resistance;
bacterial resistance construct; untranslatable RNA; tumour; oncoge
plant growth hormone; ds.
                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD00626 standard;
 WPI; 2000-365599/31
                               Ream W,
                                                                                                  05-NOV-1998;
                                                                                                                                   04-NOV-1999;
                                                                                                                                                                                                        WO200026346-A1
                                                                                                                                                                                                                                                                                                                                                                          Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium tumefaciens ipt/iaaM untranslatable BR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-AUG-2000
                                                                 (UYOR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1512
                                                                  UNIV OREGON STATE
                               Mok MC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGATGACCTGAACGAAAATTCCTGGTTAGACCCATATCCTCCCCGTCTTGTGTCCTCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAAAAATAAAGATAAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                  98US-0107185
                                                                                                                                     99WO-US26100
                                                                                                                                                                                                                                                                       /*tag= a
/note= "Corresponds
303..2105
                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                 Lee H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry
                                                                                                                                                                                                                                      "Corresponds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                       ő
                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                    Agrobacterium
                                                                                                                                                                                                                                                                                       Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              construct.
                                                                                                                                                                                                                                         mutant
                                                                                                                                                                                                                                                                                         mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1805
                                                                                                                                                                                                                                                                                       jģt
                                                                                                                                                                                                                                         iaaM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 1751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1577
                        Ś
                                                                  В
                                                                                                á
                                                                                                                                   밁
                                                                                                                                                              Ś
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XFFFXXXX0000000000000XX
   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 1788; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gall resistant
untranslatable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2544 BP; 625 A; 592 C; 674 G; 653 T; 0 other;
                                                                                                                                                                                                                                                                                                                                            678
                                                                                                                                                                                                                                                                                                                                                                                                             618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    378
   978
                                 672
                                                                    918
                                                                                                                                     858
                                                                                                                                                                     552
                                                                                                                                                                                                        798
                                                                                                                                                                                                                                        492
                                                                                                                                                                                                                                                                         738
                                                                                                                                                                                                                                                                                                         432
                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                            312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                 TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.3%; Score 1788; ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44-45; 49pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English
```

plants generated by transforming cells with an nucleic acid homologous to a gall disease-causing gene

The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium intection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaM, iaaH and ipt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium tumefaciens bacterial resistance construct, that encodes untranslatable RNA forms of both the mutant ipt and iaaM genes. This construct can suppress both shooty and necrotic gall formation in transgenic plants.

CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCCTTGAAGGGGGC TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA GCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC TAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG GCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTAGGAAAGGTAGCAGTTCTCTCCGC TAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA TTATATCTATATTGGCAAAGAAATTCTGGGGGGGGATACTTGAATCGAAACCTTGGGCGCG CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC BG 21; 0 Indels Length 2544; 0 Gaps 977 671 917 611 857 551 797 491 737 431 677 371 617 311 557 251 497 191 437 131 377 0

1037 731

음 성

В

```
1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1398
                                           1998
                                                                                                          1938
                                                                                                                                        1632
                                                                                                                                                                        1878
                                                                                                                                                                                                        1572
                                                                                                                                                                                                                                         1818
                                                                                                                                                                                                                                                                       1512
                                                                                                                                                                                                                                                                                                                                       1452
                                                                                                                                                                                                                                                                                                                                                                     1698
                                                                                                                                                                                                                                                                                                                                                                                                      1392
                                                                                                                                                                                                                                                                                                                                                                                                                                      1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1032
                                                                          1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  912
                                                                                                                                                                                           CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                                                                                                                                                    CCTCATGATTGGGACCTATTCAAGCTAATGGGATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGAGATATTGTGTTGGCCTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC
CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                           CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCCCATGGA
                                                                                                        TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                           TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                        CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                         GACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                         GACAAAATAAAGATAAAGGCTTAAGAGCCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                                                       CGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                               CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAATCCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGAGTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC
                                                                          1751
                                                                                                                                                                                                                                                                                                       1817
                                           2057
                                                                                                          1997
                                                                                                                                        1691
                                                                                                                                                                        1937
                                                                                                                                                                                                       1631
                                                                                                                                                                                                                                         1877
                                                                                                                                                                                                                                                                       1571
                                                                                                                                                                                                                                                                                                                                     1511
                                                                                                                                                                                                                                                                                                                                                                     1757
                                                                                                                                                                                                                                                                                                                                                                                                      1451
                                                                                                                                                                                                                                                                                                                                                                                                                                    1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             791
```

δ

음 성 음

5 유

**장** 함

٠5

유정

8 8 8 8

문 S 밁 S 밁 Ş д δ 문 Ş 밁 Ś 망 S 밁 S

```
RESULT 4
AAN50182
ID AAN5
XX
AC AANE
XX 25-0
DT 17-(
XX OCT
XX Pla
XX Pl
                                                                            멼
                                                                                                                     δ
                                                                                                                                                                              밁
                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                        á
                            Ś
                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 1792; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The inventors claim a vector contg. a transformation-inducing principle (TIP) gene from Ti plasmid pTi1595. The sequence of the TDNA of the octopine-type Ti plasmid has fourteen open reading frames bounded by eukaryotic promoters, ribosome binding sites, and polyadenylation sites. With the vectors, expression of structural foreign genes in plant cells is promoted. The gene esp. encodes an insecticidal toxin identical to or derived from the crystal protein of Bacillus thuringiensis.

(Updated on 25-WAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 24596 BP; 6534 A; 5510 C; 5793 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 28; Fig 1; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New DNA vectors contg. T-DNA sequence of octopine Ti plasmid for expression in plant cells to confer desirable properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plants and their cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1985-148223/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plant vector; transformation-inducing octopine Ti plasmid; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Complete nucleotide sequence plasmid pTi15955.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
17-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAN50182 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-NOV-1983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-NOV-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUN-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP145338-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAN50182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (AGRK ) AGRIGENETICS RES !
                                                                                                                                                                              5929
                                                                                                                                                                                                                                                                            5869
                                                                                                                                                                                                                                                                                                                                                                           5809
                              241
                                                                                                                             181
                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RF,
                                                                                                                                                                                                                                                                                                                                                                                                                            ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGRIGENETICS RES ASSOC
GTTCTCCCGCTTATATCTATATTTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                          CGAGAAGCTTCTAGGGGAAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                                                                                                                                                                                                                                                         CTGACAATGGTCGATAAGGCGGATGAATTGGAACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
                                                                                                                                                                                                                                                                                                                                                                                                     GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                           CGAGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                            CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kemp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumefaciens ATCC 15955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83US-0553786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84EP-0307969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.0%;
99.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1765.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the T-DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          principle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  region of the octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T; 0 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TIP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
                                                                               6048
                                                                                                                                                                              5988
                                                                                                                                                                                                                                                                            5928
                                                                                                                                                                                                                                                                                                                                                                           5868
                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                            60
```

```
6889
                                                                                                                                                                                                                                                                                                                                                      6649
                                                                                                                                                                                                                                                                                                                                                                                                 6589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6049
                                                                                                                                  6949
                                                                                                                                                                                                 1081
                                                                                                                                                                                                                       6829
                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                 6769
 7128
                                                                 1260
                                                                                                           1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
           GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                         GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                            TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                    TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCTCCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                       CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                  CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                            1259
                                                                                                                                                        1200
                                                                                                                                                                                                 1140
                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                                        6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8019
                    1379
                                                                 1319
                                                                                       7068
                                                                                                                                  7008
                                                                                                                                                                              6948
                                                                                                                                                                                                                       6888
                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                  6828
                                                                                                                                                                                                                                                                                                             6768
                                                                                                                                                                                                                                                                                                                                                                                                   6648
                                                                                                                                                                                                                                                                                                                                                                                                                                             6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
```

S

망

. 무 원

ঠ

뫄

음 성 음 성

음 성 음

중 유

중 유

**중 음 중** 

음 성 음 성

음 성 음

중 음 중

음 성

```
밁
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                    8 8 8 8
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                    뮹
                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                5
plant cells (and protoplasts) and plasmids contg. the DNA fragment which includes an opine synthase gene plus a gene for antibiotic reststance are claimed. These plasmids provide max. efficiency for transfer of foreign genes and can be amplified in the plant genome.
                                                  Plasmid
                                                                                       (AGRK )
(LUBR )
                                                                                                                      12-SEP-1984;
                                                                                                                                  08-MAY-1985
                                                                                                                                               EP140556-A.
                                                                                                                                                          Agrobacterium
                                                                                                                                                                       Plant
                                                                                                                                                                                  Sequence of
                                                                                                                                                                                               25-MAR-2003
16-OCT-1991
                                                                                                                                                                                                                  AAN50226;
                                                                                                                                                                                                                              AAN50226
                                                                                                         14-SEP-1983;
                                           useful as
                                                                                                                                                                                                                                                              7608
                                                                                                                                                                                                                                                                                     7548
                                                                                                                                                                                                                                                                                                 1740
                                                                                                                                                                                                                                                                                                              7488
                                                                                                                                                                                                                                                                                                                          1680
                                                                                                                                                                                                                                                                                                                                     7428
                                                                                                                                                                                                                                                                                                                                                  1620
                                                                                                                                                                                                                                                                                                                                                                                       7308
                                                                                                                                                                                                                                                                                                                                                                                                   1500
                                                                                                                                                                                                                                                                                                                                                                                                                7248
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1380
                                                                                                                                                                                                                                                                         1800
                                                                                                                                                                                                                                                                                                                                                                           1560
                                                               1985-112088/19
                                                                                       AGRIGENETICS RES A
LUBRIZOL GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                         S.
                                                                                                                                                                                                                                                                                     TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                      TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                           Sutton
                                                                                                                                                                                                                                                                        1801
                                                                                                                                                                                                                                                              7609
                                Page
                                                                                                                                                                                   opine synthase
                                                                                                                                                                                               (updated)
(first entry)
                                                                                                                                                                       Ţį
                                            opine s
                                                                                                                                                          tumefaciens Ti plasmid
                                                                                                          83US-0532280
                                                                                                                      84EP-0306233
                                                                           W.
                                                                                                                                                                       plasmid;
                                212-217;
                                                                                                                                                                                                                              DNA;
                                           synthase gene for selection
r for transforming plant celi
                                                                           Barker
                                                                                                                                                                                                                               24593
                                                                                       ASSOC
S INC.
                                                                                                                                                                        T-DNA;
                                69pp;
                                                                                                                                                                                   gene.
                                                                            RF
                                Japanese
                                                   and
                                                   foreign
                                                                                                                                                                                                                                                                                                  1799
                                                                                                                                                                                                                                                                                                                           1739
                                                                                                                                                                                                                                                                                                                                                                            1619
                                                                                                                                                                                                                                                                                                                                                                                        7367
                                                                                                                                                                                                                                                                                                                                                                                                    1559
                                                                                                                                                                                                                                                                                                                                                                                                                 7307
                                                                                                                                                                                                                                                                                                                                                                                                                            1499
                                                                                                                                                                                                                                                                                                                                                                                                                                         7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1439
                                                                                                                                                                                                                                                                                      7607
                                                                                                                                                                                                                                                                                                               7547
                                                                                                                                                                                                                                                                                                                                                   1679
                                                                                                                                                                                                                                                                                                                                                                7427
```

```
Query Match
Best Local Sim.
Matches 1790;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           They do no spread and (Updated of Updated of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                         6649
                                                                                                                                6589
                                                                                                                                                                                                         6529
                                                                                                                                                                                                                                                                                6469
                                                                                                                                                                                                                                                                                                                                                         6409
                                                                                                                                                                                                                                                                                                                                                                                                                                6349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5869
                                                                                             841
                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         o not contain genes specifying tumour formation and will antibiotic resistance throughout the plant population. ed on 25-MAR-2003 to correct Pf field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                      GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                   CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCTTGTTTTTCTTCCAGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                       TTCAGGGACGCTCCTAGTGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                              TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                              GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                            TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                               TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTCTCCGAAGCAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĊTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24593 BP; 6554 A; 5493 C; 5787 G; 6759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCCAATGCCGCTGTACGAGAATGGAACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1762;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gg
                                                         6708
                                                                                                                                6648
                                                                                                                                                                   840
                                                                                                                                                                                                       6588
                                                                                                                                                                                                                                                                                                                                                       6468
                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                              6408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5868
                                                                                            900
                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                              6528
                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
 RESULT 6
AAV69756
ID AAV6
XX
AC AAV6
AC AAV6
DT 01-M
XX
DT TYP
                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                          유 성
                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                         01-MAR-1999
                   Tryptophan oxygenase
                                                                                            AAV69756;
                                                                                                                                AAV69756
                                                                                                                                                                                                                                                         1800
                                                                                                                                                                                                                                                                                               7548
                                                                                                                                                                                                                                                                                                                                    1740
                                                                                                                                                                                                                                                                                                                                                                      7488
                                                                                                                                                                                                                                                                                                                                                                                                           1680
                                                                                                                                                                                                                                                                                                                                                                                                                                               7428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6709
                                                                                                                                                                                                                                                                                                                                                                    TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                        G.
                                                                                                                                                                                                                                                 –g
                                                                                                                                                                                                                                                                                                                                                                                                                                             TACCAATATTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                 TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                      TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGTCCTTCTCCAGGGATAGAGAGAGTCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCTGCCACCGAAGCTGTTCCATCGCGTTTTACAACGGTTGGCGTTGCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                             1801
                                                         (first
                                                                                                                                DNA;
                                                         entry)
                     iaaM
                                                                                                                                2211
                   gene
```

1619

7367 1559 1499

7247 1439 7187

7307

1379

7127 1319 7068 1259 7008 6948

1200

1140 8889 1080 6828

7487 1679 7427

7547 1739

7607 1799

ક

8

8 8 8 8 8

중 유

밁

Ś

음 성 음

ş 8 δ 밁 ঠ 밁 S ₽ δ

S 밁

밁 S S

밁

SSSSS &

```
Query Match
Best Local Similarity
Matches 1726; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This is the nucleotide sequence of the Agrobacterium tumefaciens iaaM gene that codes for tryptophan oxygenase (see AAW81574). This enzyme catalyses the conversion of tryptophan to indoleaceteamide in the biosynthetic pathway of the auxin indoleacetic acid. A claimed DNA construct comprises either an isopentenyl transferase (see AAW81575) or a tryptophan oxygenase encoding sequence, operably linked to an ovary or developing fruit-specific plant-expressible promoter (see AAW89755 and AAV69759). The construct is used to stably integrate enzymes involved in cytokinin or auxin biosynthesis into the plant genome to achieve a transgenic plant (preferably tomato, cucumber or watermelon) producing seedless fruit in the absence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A new construct to express useful for, e.g. producing transgenic plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9849888-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tryptophan
transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2211 BP; 528 A; 504 C; 595 G; 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 21-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-NOV-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agrobacterium tumefaciens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pollination.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ( VIND)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1999-034673/03
DB; AAW81574.
                 301
                                                 364
                                                                                   241
                                                                                                                                                      181
                                                                                                                                                                                    244
                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VIND
                                        TTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAAGATGTGCACCG
                                                                                                                                                                          CTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                                                                                                                                                                                                                                         TGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                                                           GAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                                                                                                                                                                                                                                                             GAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                                                                                                                                                                                                                                                                                                                              ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                    TGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGAT
                                                                                                                                                      CTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                                                                                                                                                                                                                        TGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTAGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                                                                                                                             ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oxygenase; iaaM gene; auxin; indoleacetic acid;
plant; seedless fruit; tomato; watermelon; cucumber;
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KANSAS STATE RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0045725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US09013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
4..2205
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                           94.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        phytohormones
substantially
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1697.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in developing fruit seedless fruit from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB
                                                                                                                                                                                                                                                                                                                                                                                                                             11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                2211;
                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ds.
                                                   423
                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                    303
                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                           183
                                                                                   300
                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                             Ŋ
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ᅜ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
S
                              밁
                                                          δ
                                                                                                   밁
                                                                                                                               Ş
                                                                                                                                                                 밁
                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                      1260
                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                         1263
                                                                                                                                                                                                                                                                                                                                           1204
                                                                                                                                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACCCCTG
                                                                                                                                                                                                                                                           TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCTTGTTTTTCCTCCAGGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCCTCCTGCTGCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGATAGTGGACGGATCGCCTTCTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTG
GAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA
                                                      AGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                                                                                                        AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
                                                                                                                                                                                        TGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGA
                                                                                                                                                                                                                                                                                                             TCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAAACA
                                                                                                                                                                                                                                                                                                                                TCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AAACA
                                                                                                                                                                                                                                                                                                                                                                              TTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                      <u>AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA</u>
                                                                                                                                                                        TGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGA
                                                                                                                                                                                                                                         TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCATTC
   1562
                                                                                                      1379
                                                                                                                                                                        1319
                                                                                                                                                                                                                                                                                                                                             1262
                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                     1439
                                                                      1502
                                                                                                                                                                                                          1382
                                                                                                                                                                                                                                                                           1322
                                                                                                                                                                                                                                                                                                             1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1023
                                                                                                                                        1442
                                                                                                                                                                                                                                           1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
```

र्

음 중

 음 성 음

5

2 Gaps

60 2

2751 120 2811

```
RESULT 7
AAT48868/c
IDT AAT488
XX AAT488
XX AAT488
XX O7-APR
XX IamS e
XW Male s
KW Canola
KW IamS;
KW Canola
KW IAMS;
KW PPHP58
XX Chimer
XX Chimer
XX Chimer
XX Chimer
XX Chimer
XX Chimer
YX Key
FT misc_d
FT misc_d
FT T
FT misc_d
FT T
FT T
IDR WO9640
XX (PION-
XX (PION-
XX (PION-
XX (PION-
XX (PION-
XX (PISMi
XX (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
Plasmid pPHP5838 (AAT48868) contains the Brassica microspore-specific Bp10 promoter linked to the indole acetamine synthase (IamS) gene from the Agrobacterium tumefaciens Ti plasmid derivative pPCV311, and to the nos 3' non-translated region. The IamS gene is involved in tumour formation in Agrobacterium-infected plant. Plasmids pPHP5838-41 (see also AAT48869-71), contg. IamS or IamH genes under control of anther-specific Bp10 or TA39 promoters, were introduced into canola lines by transformation. Male sterile plants were obtd. These can be used in the prodn. of hybrid seed using pollen
                                                                                                                                                                                                                                                                 Recombinant molecule for preparation of male to produce stress resistant plants and for ir
                                                                                                                                                                                                                                                                                                                                    WPI; 1997-052340/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Male sterile plant; hybrid seed; pollen; microspore; oil canola; rape; antisense RNA; stress resistance; herbicide resistance; transgenic plant; crop protection; lamS; indole acetamide synthase; Bp10; promoter; Brassic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9640950-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pPHP5838; ds; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-APR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT48868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT48868 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                        (PION-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression
                                                                                                                                                                                                                                                                                                                                                                               됟
                                                                                                                                                                                                                                                                                                                                                                                                                        PIONEER HI-BRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brassica sp.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGCCGCAGGATCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                             Arnison
                                                                                                                                                                                                                      Fig 27a-e;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95US-0476864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96WO-US08692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers 3794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vector pPHP5838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                             PG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "base 3794 is given as v specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tumefaciens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       b
                                                                                                                                                                                                                          224pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                        INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6112
                                                                                                                                                                                                                                                                                                                                                                             Fabijanski
                                                                                                                                                                                                                                                                                                                                                                             SF,
                                                                                                                                                                                                                                                                                                                                                                             Laurian
                                                                                                                                                                                                                                                                     increase
                                                                                                                                                                                                                                                                                       sterile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                             RS
                                                                                                                                                                                                                                                                 e plants
in seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oilseed;

    used
    yield

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1679
  S
                                             B
                                                                                       Ś
                                                                                                                                  문
                                                                                                                                                                    S
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SXS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 1689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                 1970
                                                                                                                                     2030
                                                                                                                                                                                                                        2090
                                                                                                                                                                                                                                                                                                            2150
                                                                                                                                                                                                                                                                                                                                                                                               2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2810
      961
                                                                                          901
                                                                                                                                                                             841
                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                  GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
    CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                 TCGTGCTTGTTTTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                          TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                  TTCAAGGACGCTCCCAGCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                           TTCAGGGACGCTCCTAGTGTCGTCGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                          GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCT
                                                                                                                                                                                                                                                                 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                            ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGAAGGGCCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6112 BP; 1515 A; 1466 C; 1451 G; 1679 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                               TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fertile line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88.9%;
93.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1600.4;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
```

1911

960

1020

1971

900

2031

840

2091

780

2151

2211

660

720

2271

2331

540

600

2391

480

2451

420

2511

```
RESULT 8
AAT48870/c
ID AAT48870 standard; D
XX
AC AAT48870;
XX
DT 07-APR-1997 (first
XX
DT 07-APR-1997 vect
XX
W Male sterile plant;
XX
W Male resistance
XX
W herbicide resistance
                                                                                                                                                                                                                                                                                                                                        ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                        음 성 음
                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭐
                                                                                                                                                                                                             밁
 Male sterile plant; hybrid seed; pollen; microspore; oilseed; canola; rape; antisense RNA; stress resistance; herbicide resistance; transgenic plant; crop protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1910
                                                                                                                                                                                                                                                                                                                                                                                                     1620
                                                                                                                                                                                                                                                                                                                                                                                                                                1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1,500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                     GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                           TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGTCCTTCTCTCAGGGATAGAGAGAGCTTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCAGCCACCGAAGCTGTTCCATCGCGTTTACAGCGGTTGGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GA 1801
                                                                                                                                                                                                                                                                                                                      GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                           TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGAAAGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAAGAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTCCTTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTTTCCATGAGGGAGATATTGTGTTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                           S.
                                                                                  (first
                                                       vector
                                                                                                                                        DNA;
                                                                                  entry)
                                                       pPHP5840.
                                                                                                                                          7208
                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1791
                                                                                                                                                                                                                                                                                                                                                                                                     1679
                                                                                                                                                                                                                                                                                                                                                                                                                                 1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1611
                                                                                                                                                                                                                                                                   1072
                                                                                                                                                                                                                                                                                                                                                                           1192
                                                                                                                                                Ś
                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                      없
                                   δ
                                                                    뫄
                                                                                         Ś
                                                                                                                          망
                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                  Matches 1689;
                                                                                                                                                                                                                                                                                                                                                                                                                             plasmid pPHP5840 (AAT48870) contains the tobacco anther-specific TA39(8B3) promoter and the 0' nontranslated leader operably linked to the indole acetamine hydrolase (IamH) gene from the Agrobacterium cumefaciens Ti plasmid derivative pPCV311, and to the PI-II 3' nontranslated region. The IamH gene is involved in tumour formation in Agrobacterium-infected plants. Plasmids pPHP5838-41 (see also AAT48868-71), contg. IamS or IamH genes under control of anther-specific Bp10 or TA39 promoters, were introduced into canola lines by transformation. Male sterile plants were obtd. These can be used in the prodn. of hybrid seed using pollen from a male fertile line.
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7208 BP; 1938 A; 1619 C; 1640 G; 2010 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 39a; Fig 29a-f; 224pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Recombinant molecule for preparation of to produce stress resistant plants and f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Albani DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric Nicotiana tabacum;
Chimeric Agrobacterium tumefaciens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IamH; indole acetamide hydrolase; TA39;
pPHP5840; ds; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PION-) PIONEER HI-BRED
                                                                                                                                                                                                                                                                                             2924
                                                                                                                          2744
                                                                                                                                                                                2804
                                                                                                                                                                                                                                       2864
                                                                       2684
                                          301
                                                                                                                                                     181
                                                                                               241
                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                        μ
                                                                                                                                                                                                                                                                                                           CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                             GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                      CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                             ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                      GTTCTCTCCGCTTATATCTATATTTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                            GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                  CGTGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                        CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arnison
                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96WO-US08692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 4890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= a
/note= "base 4890 is given
specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g,
                                                                                                                                                                                                                                                                                                                                                           88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fabijanski
                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                  Score 1600.4; DB 18
Pred. No. 0;
0; Mismatches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           male sterile plants - used for increase in seed yield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 promoter; tobacco;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laurian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as v
                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                  Gaps
```

2805

2565

2745 240 2685 300 2625 120

```
1440
                                1545
                                                                                                                                      1320
                                                                                                                                                                                                                                              1724
                                                                                                                                                                                                                                                                                                                 1784
                                                                                                                                                                                                                                                                                                                                                                                   1644
                                                                                                       1605
                                                                                                                                                                         1664
                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                                                1141
                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGGTGTA
TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT 1499
                                                                                                  GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                   TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                     GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTCATTGGCGCTGGCATTTCCGGAACTGGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                    TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                          GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                          GAGTCCTTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                GAGTCCTTCTCTCAGGGATAGAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                 GGTTTCCATGAGGGAGATATTGTGTTTGGCTTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGTGCTTGTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTGAAGGGGCCGTGCCATTTGACATGGTTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                      1379
                                                                                                                                                                                                                                            1665
                                                                                                                                                                                                                                                                           1259
                              1486
                                                                   1439
                                                                                                    1546
                                                                                                                                                                         1606
                                                                                                                                                                                                          1319
                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                   1785
                                                                                                                                                                                                                                                                                                                                                                                                                    1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
```

밁 Ş В 5 유

Sequence

21126

₽,

5359

₽,

4901

ü

5308 <u>ი</u> 5558 Τ, 0

other;

Вþ Ś 멍 Ś 40

5 유

Ş

음 성 음

Ş 밁 중 유

Ş

음 성 문 S

유 성

밁 ર્સ 밁 S 몽 र्

```
RESULT 9
AANGO970
ID AANG
XX AANG
AC AANG
AC AANG
DT 25-M
DT 28-O
XX AG
DT 28-O
XX AG
DE TL-D
XX AG
XX AG
XX AG
XX AG
XX AG
XX AG
XX IO-D
XX I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                           The TL-DNA sequence is that of an Agrobacterium Ri plasmid, it contains sixteen open reading frames, bounded by eukaryotic promoters, ribosome binding and polyadenylation site. The plasmid sequence may be used for genetic manipulation of plants, conveying phenotypes such as improoved resistance to environmental stress, diand parasitism.

(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                   Plant cell genetic modification - using pRi T-DNA promoter control expression of heterologous foreign structure genes.
                                                                                                                                                                                                                                             Disclosure; Fig 2; 86pp; English
                                                                                                                                                                                                                                                                                              control expression for phaseolin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TL-DNA region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
28-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INRG ) INRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-APR-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-DEC-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP204590-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAN60970;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAN60970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plasmid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - <u>Ω</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCCCAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plant plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
(first en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INST NAT RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of A.rhizogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85US-0725368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86EP-0400855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGRONOMI QUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        agropine-type plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pRiHRI.
                                                                                                                                                                                                                                                                                                                     genes,
                                                                                                                                                                                                                                                                                                                ,
е.
                                                                                                                                                                                                                                                                                                                     ώ
                                                                                                   disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1426
```

유

Length

21126;

```
В
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 540; Conserv
                                                                                                                                   8172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7333
                                                                                                                                                                                                                                                                                                                                                                    1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1040 TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7513
1636 GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAAACTCTTCCTG 1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTGTTTGGCTTCGCCTGTTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                           AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA
                                                                                                                                                                                                                                   ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                  AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAGTGATCGTGT----TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                        TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                        AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                            GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA
                                                                                                                                                                                                                                                                                                                       CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.8%;
ilarity 45.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 121.6; DB 7;
Pred. No. 5.7e-28;
0; Mismatches 634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 634; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                             8291
                                                                                                                                        8231
                                                                                                                                                                                                                              8171
                                                                                                                                                                                                                                                                                                                              8111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      979
```

5 В Ş 밁 á 밁 S 밁 S 밁 Ş 밁 Ş

유수유

5 밁 ঠ 망

Ş 밁 S 밁 Ş

á

Ś

750 GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA 809

δ 밁 ş 유 성

```
ARESULT 10
ABL13
AXX ABL13
AXX ABL13
AXX Droso
XXX Droso
XX Droso
XXX Droso
XX Droso
XXX Droso
XX Droso
X
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                S
                                                                                                         Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                    The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABE07373-ABB72072).
                                                                                                                                                                                                                                                                     The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated nucleic a
genes from Drosophila
interactions -
                                                                                                                                                                                                                     Sequence 4734 BP; 1394 A; 978 C; 1048 G; 1314 T; 0 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 35480; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; ABB69563.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster expressed polynucleotide SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABL13666;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABL13666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PEKE )
  2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       űĊ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ä
                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                               TCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCACGAAGCAAAAGTTTTGGGTTAACTCCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adams M,
                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA; 4734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                     2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid
a and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           detection reagent for detecting 1000 for elucidating cell signalling and
                                                                                                              0
                                                                                                           Score 39.8; DB Pred. No. 0.19; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ę
                                                                                                              82;
                                                                                                                                                                    23;
                                                                                                              Indels
                                                                                                                                                                 Length
                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 or more cell-cell
                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                             WIPO
                                                           749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                 0
```

```
S
                                                                                 Ś
                                                                                                                                                                                                                                밁
                                                                                                                 В
                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                        Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                               The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLIG175) and the encoded proteins
                                                                                                                                                                                                                               Sequence 4800 BP; 1265 A; 1116 C; 1141 G; 1278 T; 0 other;
                                                                                                                                                                                                                                                                       The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated nucleic a genes from Drosophila interactions -
                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID NO 41468; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila; developmental
pharmaceutical; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL15662;
                                                                                                                                                                                                                                                      specification, but was obtained in electronic
at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL15662 standard; cDNA;
                                                                                                                                                                                                                                                                                                        ABB57737-ABB72072)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-656860/75
                                                                                                                                           690 TCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGT
                                                                                                                                                                                       Similarity
                                                          GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGG
  CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATCAGAAGGT 4666
                             TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTGT
                                                                                    GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA
                                                                                                                 CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATCAGAAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adams M,
                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                     2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid
a and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ŀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , dwd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          detection reagent for detecting for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            biology; cell signalling; insecticide;
                                                                                                                                                                        0,
                                                                                                                                                                     Pred. No. 0.2;
0; Mismatches
                                                                                                                                                                                       Score 39.8;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polynucleotide SEQ ID NO 41468
                                                                                                                                                                                                  DB 23;
                                                                                                                                                                        82;
                                                                                                                                                                        Indels
                                                                                                                                                                                                 Length 4800;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1000
and c
                                                                                                                                                                        0
                             098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 or more cell-cell
                                                                                                                                                                                                                                                                        from
                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                          WIPO
                                                          4615
                                                                                      809
                                                                                                               4555
                                                                                                                                           749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1338
                                                                                                                                                                                                                                                                                                                                                                                        18
RESULT 13
AAX15122
ID AAX15
```

```
RESULT 12
RABLI3667
ID ABLI3
XX ABLI3
XX Droso
XX CPAI
XX Droso
XX
맑
                                        S
                                                                                                    밁
                                                                                                                                                     Ş
                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16175) and the encoded proteins (ABB57737-ABB72072)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1872 BP; 499 A; 477 C; 524 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ABB57737-ABB72072).
The sequence data for this patent did not form specification, but was obtained in electronic f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID NO 35483; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-656860/75.
P-PSDB; ABB69564.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila; developmental biology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster expressed polynucleotide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABL13667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABL13667 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PEKE )
  339
                                                                                                          279
                                                                                                                                                          750
                                                                                                                                                                                                                                                            690 TCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGT
                                                                                                                                                                                                                                                                                                                                 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PE
                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                 TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTC
CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATC
                                                                                                          GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGGG
                                                                                                                                                        GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Adams M,
                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                     2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Į.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , ama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1872
                                                                                                                                                                                                                                                                                                                                                  Score 39.2; DB Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Myers
                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EΕ
                                                                                                                                                                                                                                                                                                                                                                                                                                        372 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                signalling;
                                                                                                                                                                                                                                                                                                                                                                               DB 23;
                                                                                                                                                                                                                                                                                                                              78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      n part of the printed format directly from
                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID NO 35483
                                                                                                                                                                                                                                                                                                                                                                                  1872;
                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WIPO
                                                                                                          338
                                                                                                                                                                                                                    278
```

0

AAX15122 standard; cDNA to mRNA; 1575 BP

```
RESULT 14
ABZ56743
ID ABZ56
XX ABZ56
XX ABZ56
XX ABPe1
XX ASPe1
                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                         The present sequence encodes a protein which induces cell death (apoptosis) and inhibits the proliferation of cancer cells. The protein (apoptosis inducing protein, AIP) is isolated from chub mackerel. The protein can be used as an anticancer agent and as reagent for study of the mechanisms of apoptosis in vitro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell death; apoptosis; inhibition; proliferation; cancer cell; apoptosis inducing protein; AIP; chub mackerel; anticancer; ss
                                                                                                                                                                                                                                                                                                                                                   Sequence 1575 BP; 436 A; 358 C; 406 G; 375 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 5; Page 32-34; 47pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis inducing protein from mackerel and use as anticancer agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-070139/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9852972-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scomber japonicus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-1999
                      Aspergillus oryzae.
                                             expressed
                                                          Aspergillus oryzae;
                                                                               Aspergillus
                                                                                                       28-MAR-2003
                                                                                                                                                   ABZ56743 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-NOV-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX15122;
 WO200279476-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TENS-)
                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                713 AAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TENSEI SUISAN CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       acid
                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                   CTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGG
                                                                                                                                                                                                                                                         ATGTGGTTATAGTCGGAGCTGGCATGGCCGGACTGACGGCGGCCAAGTTACTGCAAGACG
                                            sequence
                                                                              oryzae polynucleotide
                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97JP-0133549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-JP02261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1..1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
                                            tag; gene;
                                                          fermentation; fungus; industrial;
                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                   2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       an
                                                                                                                                                     468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      apoptosis inducing protein.
                                                                                                                                                                                                                                                                                                        ٥.
                                                                                                                                                                                                                                                                                                                   Score 38.6; DB 20;
Pred. No. 0.25;
                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                 SEQ ID
                                                                                 NO 5856
                                                                                                                                                                                                                                                                                                         34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene encoding it -
                                                                                                                                                                                                                                                                                                                                                    other;
                                                                                                                                                                                                                                                                                                                              Length 1575;
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                              287
                                                                                                                                                                                                                                    821
                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for
                                                                                                                                                                                                                                                                                   772
                                                                                                                                                                                                                                                                                                        1;
```

```
ARCO5199
ID AACO5199
XX
XX
AC AACO5
XT 06-OC
DT 06-OC
XX
Human
XX
Human
XW gene
XX
OS Homo
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a polynucleotide having any of 6006 specific sequences (ABZ50888-ABZ50893), which are expressed by a fungus under specific culture conditions including one or more of eutrophic, oligotrophic, solid, early germination, alkaline, high temperature, low temperature or malcose culture or polynucleotides stringently hybridising to these sequences. The polynucleotides are useful for monitoring the progress of fermentation and the growth conditions of a fungus, to these sequences are described by the sequence data for the growth conditions of a fungus, and fermentation. Also monitoring for fungual contamination.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO are formal part of the printed are for interesting the property of the printed are formal part of the part of the printed are formal part of the printed are formal part of the part of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Machida M,
Takeuchi M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                       Human; 5' EST; expressed gene therapy; chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Detection of expression of specific Aspergillus genes the fermentation and growth conditions of the fungus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NARE-)
                                                                                                                              Human secreted
                                                                                                                                                                      06-OCT-2000
                                                                                                                                                                                                                  AAC05199;
                                                                                                                                                                                                                                                          AAC05199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 5856; 48pp + Sequence Listing; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001JP-0098371.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-MAR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (NAAD-) NAT
(NARE-) NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003-046817/04.
                                                                                                                                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                                                                                                                                                             988
                                                                                                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATAGCGTCGGAATCCACAATTGGGAAATACTCGAAGCGAGTAACCGGGTAGGAGGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                             TTTCCT 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                     CIGCCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCCGAACCAAACTCGTAGGGAACACAG---GCGAATGGGCCGARATGGGGCCCATGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACACCACAATCGCCATCATCGGCGCCGCCATCTCAGGCCTCACAGCCGCCCTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    468 BP; 124 A; 141 C; 111 G; 90 T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTGGTCACATGCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGGATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INST ADVANCED IND SCI & RES INST BREWING. FOOD RES INST MIN AGRIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Akita O, Kashiwagi Y,
Kobayashi T, Kitamot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002WO-IB00890
                                                                                                                            protein 5'
                                                                                                                                                                                                                                                                                                                                                                   346
                                                                                                                                                                                                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.1%;
                                                                                                                                                                        entry.
                                                              mapping; ss.
                                                                                                                                                                                                                                                             273
                                                                                                                              EST,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                iwagi Y, Kitamoto
Kitamoto N, Gomi
                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 38.4; DB Pred. No. 0.14;
                                                                                                                              SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TECHNOLOGY
                                                                                                                                .
No
                                                                                      secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВB
                                                                                                                                9274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7,7
                                                                                      protein; cDNA isolation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Horiuchi H;
Abe K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for monitoring using DNA probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>س</u>
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲,
```

EP1033401-A2

```
Search completed: November 23, Job time: 483.254 secs
                                                                                               ঠ
                                                                                                                                            밁
                                                                                                                                                                           δ
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                   The present sequence is one of a large number of 5' ESTs derived from CC mRNAs encoding secreted proteins. No ORF has yet been conclusively CC identified within the present sequence. The 5' ESTs were prepared from total human RNAs or polyA+ RNAs derived from 30 different tissues. EST CC sequences usually correspond mainly to the 3' untranslated region (UTR) CC libraries. Such ESTs are not well suited for isolating cDNA sequences they are not well suited for isolating cDNA sequences CC derived from the 5' ends of mRNAs and even in those cases where longer CC cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design carpression and secretion vectors.
                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                                                                                                                                                 Sequence 273 BP; 53 A; 73 C; 66 G; 80 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and for diagnostic, forensic, gene therapy and chromosome mapping procedures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID 9274; 71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-500381/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-FEB-2000; 2000EP-0200610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GEST ) GENSET
                                                                        217
                                                                                                        987
                                                                                                                                              157
                                                                                                                                                                                                                                             97
                                                                                                                                                                                                                                                                                             90;
                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                          AGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACCCCCTGACCTCAAGTGATCAGC 216
                                                                    CCACCTCGGCTTCCCAAAGTGCTGGGATTACAGGTGTGATCCACTGCACCCGGTCCA 273
                                                                                                    CTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGTTCCA 1043
                                                                                                                                                                                                                   CGATCTGGGCTCGATGCAACCTCTGCCTCCCAGGTTCAAGCAATTTTCCTGCCTCGGCAG 156
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0122487
                                                                                                                                                                                                                                                                                                            2.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Duclert A,
               2003, 21:01:45
                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                         Score 37.8; DB 21;
Pred. No. 0.16;
0; Mismatches 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Giordano J;
                                                                                                                                                                                                                                                                                                                             Length 273;
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                         Gaps
```

## THIS PAGE BLANK (USPTO)

AU199996 AU199996 BJ108542 BJ108542 AU203802 AU203802

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
10
10
                                                                                                                                                                              Pred. No.
score grea
and is der
                                                                                       Score
   49.8
44.8
44.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq
                                                                                                                                                                            No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                       Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-434-837-10_COPY_1_1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              November 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maximum Match 100%
Listing first 45 summaries
 N N N N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atgtcagcttcacctctcct.....ctatgagtcgcaggatccga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_htc:*
gb_est1:*
gb_est2:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est6:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_estov:*
em_estpl:*
em_estro:*
                                                                                                                                                                                                                                               em_gss_hum:
em_gss_inv:
em_gss_pln:
em_gss_vrt:
em_gss_fun:
em_gss_mam:
em_gss_mam:
em_gss_mus:
em_gss_pro:
em_gss_pro:
em_gss_pro:
em_gss_vr1:
em_gss_vr1:
gb_gss1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estin:*
em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_esthum:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_estba:*
                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    estro:*
 618
564
481
486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003, 21:01:51 ; Search time 3836.59 Seconds (without alignments) 11409.196 Million cell updates
   12
12
12
AU239500
2 BJ123611
2 BJ101485
2 BJ103567
                                                                                         IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45562784
AU239500 AU239500
BJ123611 BJ123611
BJ101485 BJ101485
BJ103567 BJ103567
                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
AU239500
LOCUS
                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42.6
42.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seki,M., Narusaka,M., Ishida,J., Kamiya,A., Satou,M., Nakajima,M., Akiyama,K., Enju,A., Oono,Y., Sakurai,T., Carninci,P., Kawai,J., Itoh,M., Ishii,Y., Arakawa,T., Shibata,K., Shinagawa,A., Muramatsu,M., Hayashizaki,Y. and Shinozaki,K.

Large scale analysis of Arabidopsis full-length cDNA Unpublished Contact: Motoaki Seki Plant Functional Genomics Research Group RIKEN Genomic Sciences Center 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan Tel: 81-298-36-4059
                                                                                                                                                                                                                           Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.

1 (bases I to 618)

1 (bases I to 618)

1 (bases I to 618)
                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
AU239500
                                                                                                                                                                                                                                                                                                                                                                                                               AU239500 RAFL19 Arabidopsis thaliana cDNA clone RAFL19-89-D06 5',
                                                                                                                                                                                                                                                                                                                                                           AU239500.1 GI:19878669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \begin{array}{c} 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\ 550 \\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       912222233433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BI300778
BI296551
BI296551
BJ305833
BI4615075
BY4614930
BI368223
AI457056
BI566474
BI568474
BI588865
AA440930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AU19996
BJ108542
AU203802
BJ120847
AU201678
CR401025
BJ121613
BJ1216135
BJ1171635
AU207635
BJ117235
BJ117235
BJ117453
BJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
```

EST 01-APR-2002

BJ120847 BJ120847

AUZ201678 AUZ201678

CB401025 OSTF186671

BJ121613 BJ121635

AUZ07635 AUZ07635

AUZ07635 AUZ07635

AUZ07635 AUZ04573

BJ101145 BJ1011235

BJ1011235 BJ117235

BJ101235 BJ103250

BJ103250 BJ103250

BJ103250 BJ103250

BJ103250 BJ103250

BJ103250 BJ103250

BJ103250 BJ103250

BJ103250 BJ103250

BJ10117453 BJ10117453

BUJ01110 BJ101110

AUI09666 AUI09666

BJ117453 BJ117453

BUJ17453 BUJ17453

BUJ17453 BUJ17453

BUJ17453 BUJ17453

BUJ17453 BUJ17453

BUJ17453 BUJ17453

BUJ17453 BUJ17453

BUJ176097 BJ76097

ALA15995 T7 end of

BUB21300 UB21CPB1

BX376097 BJ76097

ALA15995 T7 end of

BUB21300 WB1CFT211615

CA927634 Pan troopl

ARJ101650 EST211615

CA927678 UT-R-CV1-BJ307876

BJ30778 UT-R-CV1-BJ307876

BJ30778 UT-R-CV2-BJ30585

BJ30781 BJ30833

BJ308

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
BJ123611
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
. Phahditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              An Arabidopsis full-length cDNA library was constructed essentially as reported previously (Seki et al., 1998). CDNA cleaved with BamHI and XhoI was ligated to modified Lambda FLC-1 vector (Carninci et al., submitted for publication) digested with BamHI and Sall. This clone is in a modified pBluescript vector. Please visit our web
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BJ123611 unpublished oligo-capped Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                          National Institute of Genetics
1111 Yata, Mishima, Shizuoka 4
                                                                                                                                                                                                                                                                                                               Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                     Danalianed
                                                                                                                                                                                                                                                                                                                                Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                         and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                         Kohara, Y., Shin-i, T., Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                    complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGGGACGCTCC 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGATGTATTGATACTGGAAGCGACGGATCGGATCGGAGGAAGAATACATAAACAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCATTGGCGCTGGAATCTCCGGAATATCGGCGGAGAAGATTCTCGTCGAGAACGGAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGGTGACGTGCC 214
                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (http://www.gsc.riken.go.jp/e/plant/index _e.html)
                                                                                                                                                                                                                                        81-559-81-6855
                                                                                                                                                                                                                                                             81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                               tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                             /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="mixture of silique and
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:3702"
                                  dev_stage="L1"
                                                     /sex="hermaphrodite"
/tissue_type="whole animal"
                                                                                        clone="yk1302a06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone="RAFL19-89-D06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Arabidopsis
                                                                                                                              strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:18283750
                                                                                                           _xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.8%;
                 _līb="unpublished oligo-capped cDNA library,
stage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 49.8; DB 9
Pred. No. 0.0069;
0; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              564 bp
                                                                                                                                                                                                                                                                            411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA linear EST 23-JAN-2002
CDNA library, C. elegans L1 stage
yk1302a06 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 9;
                                                                                                                                                               elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52;
                                                                                                                                                                                                                                                                                                                                                                                                         Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 flower"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                our web
                                                                                                                                                                                                                                                                                                                                                                                                           Suzuki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                   C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

밁 δ 밁 δ 밁 ঠ

```
RESULT 3
BJ101485
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
           S
                                     밁
                                                           á
                                                                                      밁
                                                                                                            Ś
                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                               source
             826
                                      324
                                                                                       264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BJ101485
BJ101485.1
                                                                                                                                        82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BJ101485 481 bp
BJ101485 unpublished oligo-capped
Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Nematoda; Chromadorea; Rhabditidae; Peloderinae; Caenorhabditis 1 (bases 1 to 481)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                          Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                              Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                      Center For Genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kohara,Y., Shin-i,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                       National Institute of Genetics
                                                                                                                                                                                                                                                                                                                                                                                                             1111 Yata, Mishima, Shizuoka 411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
CTTTGGTCACATGCTTTCAGGGACG
                                                                                                        AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complementary view of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACCGTCTATAGCAATCGTCGGCGCGCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                      ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGATCTCGACCGGATCGGAGGCAGA
                                                              CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                       ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                    81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           þ
                                                                                                                                                                                                                  elegans
                                                                                                                                                                                                                              /dev_stage="L1"
/clone_lib="unpu
                                                                                                                                                                                                                                                      tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                    organism="Caenorhabditis
                                                                                                                                                                                                                                                                  sex="hermaphrodite"
                                                                                                                                                                                                                                                                                clone="yk1027a04"
                                                                                                                                                                                                                                                                                                        strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:18244155
                                                                                                                                                                                                                                                                                            xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                    2.5%;
56.6%;
                                                                                                                                                                                                   lib="unpublished oligo-capped cDNA library, It stage" 7 c 104 g 135 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ი
                                                                                                                                                                                                                                                                                                                                                                                                                                      Resource Information
                                                                                                                                       Score 44.2; Di
Pred. No. 0.27
0; Mismatches
                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44.8;
No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C.elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            151
                                                                                                                                                    DB
. 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA linear E
cDNA library, C. el
yk1027a04 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                   elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽B
                                                                                                                                                                12;
                                                                                                                                         63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rhabditida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear EST 18
rary, C. elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            others
                                                                                                                                                                 481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 18-JAN-2002
                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rhabditoidea
                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L1 stage
                                                                                                                                                                                                                                 ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                        323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                        0
```

```
REFERENCE
AUTHORS
                                                                SOURCE
ORGANISM
                                                                                                                                                                                               RESULT 5
AU199996
                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
BJ103567
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                  KEYWORDS
                                                                                                                   VERSION
                                                                                                                                  ACCESSION
                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                               313
                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          384
                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
                              Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota, Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                              508 bp
AU199996 unpublished oligo-capped
Caenorhabditis elegans cDNA clone
AU199996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BJ103567
486 bp mRNA linear EST 18-JAN BJ103567 unpublished oligo-capped cDNA library, C. elegans L1 Caenorhabditis elegans cDNA clone ykl051f01 5', mRNA sequence.
 Kohara,Y.,
                                                                                                                 AU199996.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BJ103567.1 GI:18246237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kohara,Y., Shin-i,T., Thierry-Mieg,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis elegans
                                                                                                                                                                                                                                                               ATTCATGCCATACCGTACAAGGATG 337
                                                                                                                                                                                                                                                                                              CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                              ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 312
                                                                                                                                                                                                                                                                                                                                                     CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                            AAACCGTCTATAGCAATCGTCGGCGCGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                               AAGCCGAAAGTGGCGGTCATTGGCGCCTGGCATTTCCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complementary view of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTCATGCCATACCGTACAAGGATG
                  (bases 1 to 508)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="whole animal"
/dev_stage="LI"
/clone_lib="unpublished oligo-capped cDNA library,
clone_lib="unpublished oligo-capped cDNA library,
elegans L1 stage"
104 c 114 g 130 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="hermaphrodite"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             db_xref="taxon:6239"
clone="yk1051f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain="N2"
 Shin-i, T.,
                                                                                                                 GI:14827576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
Thierry-Mieg,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 44.2; DB Pred. No. 0.28; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C.elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          408
                                                                                                                                          mRNA linear EST 17-JU
CDNA library, stage L2
yk774a07 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genome
Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 486;
                                                                                                                                                                              EST 17-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 18-JAN-2002
 Suzuki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Suzuki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ი
                                                                                                                                                                                                                                                                                                                                                                                                                             765
                                                                                                                                                                                                                                                                                                                                                                                           252
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
BJ108542
LOCUS
                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                               FEATURES
                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         826 CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                    Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 511)
Kohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BJ108542
511 bp mRNA linear EST 30-MAy BJ108542 unpublished oligo-capped cDNA library, C. elegans L1 Caenorhabditis elegans cDNA clone ykl109b04 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
82; Conserv
                                                                                                                                            Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
                                                                                                                                                                                           On Jan 23, 2002 this sequence version replaced Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                             and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                            BJ108542.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 81-559-81-6854 Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and Sugano,S.
                                                                                                                                                                                                                                             complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complementary view of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          148
                                                                                                               81-559-81-6856
81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                             tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yuji Kohara
               /mol_type="mRNA"
/strain="N2"
                                               organism="Caenorhabditis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone_lib="unpublished oligo-capped cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:6239"
/clone="yk774a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                            GI:31243973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109 с
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 44.2; DB
Pred. No. 0.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          c
                                               elegans'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 508;
                                                                                                                                                                                                                                                                                                                                                                                                                                linear EST 30-France cary, C. elegans L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                            gi:18268570
                                                                                                                                                                                                                                                                           , <del>U</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                            Rhabditoidea
                                                                                                                                                                                                                                                                             Suzuki,Y
```

Gaps

825 264 765 0 stage

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
AU203802
밁
                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                  source
                                                                  Local
230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        269
                          706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           706
                                                      82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST.
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
Eukaryota; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AU203802

AU203802 unpublished oligo-capped Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                                                                                       National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411,
Tel: 81-559-81-6854
                                                                                                                                                                                                                                                                                                                                                                                Genome Biology Lab.
                                                                                                                                                                                                                                                                                                                                                                                             Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                            On Jul 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kohara, Y., Shin-i, T., Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AU203802.2
                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
AMACCGTCTATAGCAATCGTCGGCGCGCGCGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                       complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGAACTTGGAATTTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADACCGTCTATAGCAATCGTCGGCGCGCGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                         AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTCATGCCATACCGTACAAGGATG
                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                     2.5%;
llarity 56.6%;
Conservative
                                                                                                                                                                                                                                                                                                                          81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                              ykohara@lab.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone lib="unpublished oligo-capped cDNA library, elegans L1 stage" 108 c 117 g 135 t 1 others
                                                                                                                                                                /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="Ll"
                                                                                                                                                                                                           /db_xref="taxon:6239"
/clone="yk825e11"
                                                                                                                                                                                                                                                    organism="Caenorhabditis/mol_type="mRNA"
                                                                                                                                                   clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                         strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone="yk1109b04"
                                                                                                                                                                                                                                                                                                                                                                                                           2001 this sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:31231885
                                                                                                                          114 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.5%;
                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                     Score 44.2; DB Pred. No. 0.28; O; Mismatches
                                                                                                                       114 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 44.2; DB 12;
Pred. No. 0.28;
0; Mismatches 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           850
                                                                                                                                                                                                                                                                                                                                                                                                              version
                                                                                                                          143 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA linear EST 30-MJ
cDNA library, stage L1
yk825e11 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                      Japan
                                                                                                                                                                                                                                                                   elegans"
                                                      63;
                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                            replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thierry-Mieg, D.,
                                                                              Length 513;
                                                                                                                          1 others
                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                            gi:14834726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 30-MAY-2003
                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rhabditoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Suzuki, Y.
                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                268
                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT 9
AU201678
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
BJ120847
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                á
                                                                                                                                                                                                 맑
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
               ACCESSION
                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                            706
                                                                                                                                       313 ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                   253
                                                                                                                                                                                                                                                            193 AAACCGTCTATAGCAATCGTCGGCGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350 ATTCATGCCATACCGTACAAGGATG 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               766
Caenorhabditis elegans
AU201678
AU201678.1 GI:14830776
                              AU201678 unpublished oligo-capped cDNA library, stage Ll Caenorhabditis elegans cDNA clone yk797d07 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                         82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BJ120847

BJ120847 unpublished oligo-capped cDNA library, C. elegans L1
Caenorhabditis elegans cDNA clone yk1261a07 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BJ120847.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 529)
Kohara, Y., Shin-i, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BJ120847
                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                 AAGCCGAAAGTGGCGGTCATTGGCGCCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complementary view of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rhabditidae; Peloderinae;
                                                                                                                                                                     CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                 ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                   154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81-559-81-6855
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="unpublished oligo-capped cDNA library, elegans L1 stage" 112 c 121 g 142 t
                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="whole animal"
/dev_stage="L1"
/clone_lib="unpublished oli;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:6239"
/clone="yk1261a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="hermaphrodite"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         strain="N2"
 GI:14830776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:18280980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 529
                                                                                                                                                                                                                                                                                                                                       2.5%;
                                                                                                                                                                                                                                                                                                                       Score 44.2; DI
Pred. No. 0.28
0; Mismatches
                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                       337
                                                                                                                                                                     850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                411-8540, Japan
                                                                                                                                                                                                                                                                                                                                         28;
                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         elegans"
                                                                                                                                                                                                                                                                                                                         63;
                                                                                                                                                                                                                                                                                                                                                     12;
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                        529;
                                                             EST 17-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 23-JAN-2002
                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rhabditoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Suzuki, Y.
                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                   ი
                                                                                                                                                                                                   312
                                                                                                                                                                                                                                   825
                                                                                                                                                                                                                                                              252
                                                                                                                                                                                                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               825
                                                                                                                                                                                                                                                                                                                         0
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                        RESULT 10
CB401025
                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL COMMENT
                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                         CEYWORDS
                                                                                                                                                                                                                                                                                                                            Shoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                              TITLE
                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                          349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                     Reboul, J., Vaglio, P., Rual, J.F., Lamesch, P., Martinez, M., Armstr, C.M., Li, S., Jacotot, L., Bertin, N., Janky, R., Moore, T., Hudson, J.R., Hartley, J.L., Brasch, M.A., Vandenhaute, J., Boulton, S., Endress, G.A., Jenna, S., Chevet, E., Papasotiropoulos, V., Tolias, P., Ptacek, J., Snyder, M., Huang, R., Chance, M.R., Lee, H., Doucette-Stamm, L., Hill, D.E. and Vidal, M. C. elegans ORFeome version 1.1: experimental verification of the genome annotation and resource for proteome-scale protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST.
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Ner
                                                                                                                                                                   Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

1 (base 1 to 560)
                                                                                                                                                                                                                                                                                           CB401025
OSTF186F11_1 AD-wrmcDNA
CB401025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome Biology Lab.
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 4:
Tel: 81-559-81-6854
Fax: 81-559-81-6855
Nat. Genet., (2003) In press Contact: Vidal M
                            expression
                                                                                                                                                                                                                                        Caenorhabditis elegans
                                                                                                                                                                                                                                                                            CB401025.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kohara,Y., Shin-i,T., Thierry-Mieg,J., Thierry-Mieg,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                       ATTCATGCCATACCGTACAAGGATG 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACCGTCTATAGCAATCGTCGGCGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    compl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 540)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="Ll"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:6239"
/clone="yk797d07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mo_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                          GI:30742752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.5%;
56.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nematoda; Chromadorea; Rhabditida; Rhabditoidea
derinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 44.2; DB Pred. No. 0.28; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans cDNA,
                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 411,
                                                                                                                                                                                                                                                                                                                       gd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147 t
                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 540;
                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                       EST 15-MAY-2003
                                                                                                                                                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                           Tolias, P.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Suzuki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                            of the
                                                                                                                                                         Armstrong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       765
                                                                                                                                           JOURNAL COMMENT
                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
BJ121613
                            FEATURES
                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                           TITLE
                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
```

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189 ATTCATGCCATACCGTACAAGGATG 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
                                                                                                          Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Tel: 81-559-81-6856 Fax: 81-559-81-6855
                                                                                                                                                                                                                   Unpublished
Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
                                                                                                                                                                                                                                                                                                                                                                                                                               BJ121613 S84 bp mRNA linear EST 23-JAN BJ121613 unpublished oligo-capped cDNA library, C. elegans L1 Caenorhabditis elegans cDNA clone yk1278f01 5', mRNA sequence. BJ121613 BJ121613.1 GI:18281750 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 Jimmy Fund Way Smith 858, BOSTON, MA 02115, USA Tel: 617 632 5180
Fax: 617 632 5180
Email: Marc Vidal@dfci.harvard.edu
Sequence tag of Gateway entry clones. The primers used we designed on the predicted protein encoding ORF. C. elegan cloning project: Contact david_hill@dfci.harvard.edu or marc_vidal@dfci.harvard.edu
                                                                                                                                                                                                                                                                                   and Sugano,S.
                                                                                                                                                                                                                                                                                                     Kohara, Y., Shin-i, T.,
                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POLYA=No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                               complementary view of the
                                                                                                                                                                                                                                                                                                                                               Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                         (bases 1 to 584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Farber Cancer Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="AD-wrmcDNA"
/note="The AD-wrmcDNA library was generated with poly(A)+
RNA isolated from both hermaphrodite and male N2 worms of
all larval stages, embryos, adults and dauers and the
subsequent generation of cDNAs by poly(A) priming. The
cDNAs were cloned into pPC86"
a 116 c 122 g 147 t
/organism="Caenorhabditis elegans"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Caenorhabditis elegans"/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dev_stage="mixed stage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="Hermaphrodite and male"
/tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.5%;
56.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 44.2; D
Pred. No. 0.28
0; Mismatches
                                                                                                                                                                                                                                                                                                     Thierry-Mieg,J.,
                                                                                                                                                                                                                                                             C.elegans genome
                                                                                                                                                                                                                                                                                                                                                  Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                     411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 28 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The primers used were
oding ORF. C. elegans
                                                                                                                                                                                                                                                                                                       Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   elegans ORFeome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 23-JAN-2002
elegans L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                        Rhabditoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
RESULT 12
BJ121635
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                           Query Match
Best Local S
Matches 82
                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTTCCGGACTCGTGGTGGCAAACGAACTG
                706
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST. Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea Eukaryota; Metazoa; Nematoda; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BJ121635 unpublished oligo-capped Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82;
                                                                                                                                                                                                                                                                                                                                                  Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 586)
Kohara,Y., Shin-i,T., Thierry-Mieg,J.,
and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BJ121635
                                                                                                                                                                                                                                                                                                                                                                                                Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                         A complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BJ121635.1 GI:18281772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                         Similarity
AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                          2.5%;
ilarity 56.6%;
Conservative
                                                                                                                                                                                                                                                                                                                         81-559-81-685
                                                                                                                                                                                                                                                                                                                                      81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                          tshini@genes.nig.ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
/dev_stage="L1"
/clone_lib="unpublished oligo-capped
elegans_L1 stage"
a 122 c 130 g 154 t
                                                                                                             /dev_stage="L1"
/clone_lib="unpublished oligo-capped
elegans L1 stage"
123 c 130 g 154 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:6239"
/clone="yk1278f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strain="N2"
                                                                                                                                                                                                      /db_xref="taxon:6239"
/clone="yk1278h02"
                                                                                                                                                                                                                                               /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                          /sex="hermaphrodite"
/tissue_type="whole animal"
                                                                                                                                                                                                                                    strain="N2"
                                                                                                                                                                                                                                                                                . 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.5%;
                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 44.2;
Pred. No. 0.
                                          Score 44.2; DB 12;
Pred. No. 0.29;
D; Mismatches 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                586 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear EST 23-JAN-2002 cDNA library, C. elegans L1 stage yk1278h02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 29;
                                                                                                                                                                                                                                                                elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63;
                                                                                                                                                                                                                                                                                                                                                     Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA
                                                                                                                                               cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Suzuki, Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ი
                                                                                                                                                റ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       765
                  765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                             0
```

```
RESULT 14
BJ101145
LOCUS
                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
AU207635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                Ş
                                                                                                                                                                               밁
                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                             DEFINITION
                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rocus
 ACCESSION
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                            223
                                                                                                                     343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Caenorhabditis elegans
Bukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 597)
Kohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AU207635 unpublished oligo-capped cDNA library, stage L1
Caenorhabditis elegans cDNA clone yk1004b11 5', mRNA sequence.
BJ101145 603 bp
BJ101145 unpublished oligo-capped
Caenorhabditis elegans cDNA clone
BJ101145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: ykohara@lab.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 81-559-81-6854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Yuji Kohara
Genome Biology Lab.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Sugano, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AU207635.1 GI:14841711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AU207635
                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                               AAGCCGAAAGTGGCGGTCATTGGCGCCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                 CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                             CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                                                                                                                                                                           ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMACCGTCTATAGCAATCGTCGGCGCCCGGTATTTCCCGGACTATCGACCGCCGCGTCGACTG
                                                                                                                    ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                 ATTGAACTTGGAATTGÁCGÁTTTTGATÁTCTÁCGÁÁGGTCTCGÁCCGGATCGGÁGGCÁGA
                                                                                                                                                                                                                                                                                                                                                                                  179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81-559-81-6855
                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                ø
                                                                                                                                                                                                                                                                                                                                                                                                                          /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="Ll"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:6239"
/clone="yk1004b11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain="N2"
                                                                                                                                                                                                                                                                                                                     2.5%;
                                                                                                                                                                                                                                                                                                                                                                                  126 c
                                                                                                                                                                                                                                                                                                      o
;
                                                                                                                                                                                                                                                                                                     Score 44.2; DB Pred. No. 0.29; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         850
                                                                                                                                                                                                                                                                                                                                                                                  161 t
              mRNA linea
d cDNA library,
e yk1022g05 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     elegans"
                                                                                                                                                                                                                                                                                                        63;
                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                    Length
                 linear E
rary, C. el
S 5', mRNA
                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                      597;
                         . elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 17-JUL-2001
                                               EST 18-JAN-2002
                                                                                                                                                                                                                                                                                                        ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rhabditoidea
                                                                                                                                                                                                                                                                                                      Gaps
                               L1 stage
                                                                                                                                                                                                                                                                          765
                                                                                                                                                                                    342
                                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269
                                                                                                                                                                                                                                                                                                        0
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
AU204573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                     349 ATTCATGCCATACCGTACAAGGATG 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289 ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229 AAACCGTCTATAGCAATCGTCGGCGCGGTATTTCCGGACTATCGACCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
Contact: Yuji Kohara
Genome Biology Lab.
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411,
Tel: 81-559-81-6854
                                                                                                                               Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea
; Rhabditidae, Peloderinae, Caenorhabditis.
1 (bases 1 to 608)
Kohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D., Suzuki, Y.
and Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity 56.0
82; Conservative
                                                                                                                                                                                                                                                                                                    AU204573 608 bp AU204573 unpublished oligo-capped Caenorhabditis elegans cDNA clone AU204573
                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BJ101145.1
EST.
                                                                                                                                                                                                                                                                                  AU204573.1 GI:14836084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 603)
Kohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans
                                                                                                              complementary view of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="yk102g05"
/sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="Ll"
/clone_lib="unpublished_oligo-capped_cDNA_library,
elegans_Ll_stage"
elegans_Cl_stage="listage"
a 130 c 131 g 162 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Caenorhabditis elegans"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:18243815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.5%; Score 44.2; DB 56.6%; Pred. No. 0.29; tive 0; Mismatches
                                                                                                              the C.elegans genome
                     Japan
                                                                                                                                                                                                                                                                                                                 mRNA linear EST 17-Ju
cDNA library, stage L4
yk839b11 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 603;
                                                                                                                                                                                                                                                                                                                                                        EST 17-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
Search completed: November 24, Job time: 3837.59 secs
                                                       밁
                                                                             á
                                                                                                          В
                                                                                                                                  ş
                                                                                                                                                                  밁
                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                        Query Match
Best Local S
Matches 82
                                                                                                            233
                                                                                                                                                                173 AAACCGTCTATAGCAATCGTCGGCGCGCGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                      293
                                                                             826 CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                       766
                                                                                                                                                                                            706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                         82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email:
                                                                                                                                                                                                                                     Similarity
                                                                                                            ATTGAACTTGGAATTGACGATTTTGATÄTCTACGÄAGGTCTCGACCGGATCGGAGGCAGA 292
                                                                                                                                      CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                      ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ykohara@lab.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                  /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L4"
                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:6239"
/clone="yk839b11"
                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Caenorhabditis elegans"
/mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                     clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                      . .608
                                                                                                                                                                                                                                                                                              129 c
                                                                                                                                                                                                                                     2.5%;
             2003, 04:01:40
                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                           131 g
                                                                                                                                                                                                                                     Score 44.2;
Pred. No. 0.
                                                                                                                                                                                                                        Mismatches
                                                                                850
                                                                                                                                                                                                                                                                                              160 t
                                                                                                                                                                                                                                     . 29;
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                      63;
                                                                                                                                                                                                                                                  9;
                                                                                                                                                                                                                                                 Length 608;
                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                        0
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                  232
                                                                                                                                                                                            765
```

## THIS PAGE BLANK (USPTO)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                                                                                                                                    a
                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                  <u>α</u> α
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
            Pred. No. score grea and is der
            1752.4
11697.4
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1121.6
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              November 23, 2003, 20:32:25; Search time 105.342 Seconds (without alignments) 7546.168 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-434-837-10_COPY_1_1801
1801
1 atgtcagcttcacctctcct.....ctatgagtcgcaggatccga 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
      GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
6 542814771
3 US-09-073-587-2
3 US-09-073-589-8
1 US-08-459-559-8
1 US-08-459-559-19
1 US-08-458-831-19
1 US-08-458-831-19
1 US-09-458-831-19
2 US-09-103-840A-2
3 US-09-103-840A-2
4 US-09-415-277C-4
4 US-09-415-277C-6
5 US-09-404-627-3
1 US-09-252-991A-8485
1 US-09-252-991A-8485
1 US-09-252-991A-8322
2 US-09-252-991A-6497
2 US-09-252-991A-6497
2 US-09-252-991A-6535
2 US-09-342-268-59
2 US-08-342-268-59
2 US-09-342-268-59
2 US-08-342-268-59
3 US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
Patent No. 5428147
Sequence 2, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 4, Appli
Sequence 1, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 8485, Appli
Sequence 8526, Appli
Sequence 6497, Appli
Sequence 6535, Appli
Sequence 59, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
```

Qy Ma	54 S E Q C C C C C C C C C C C C C C C C C C	0 0000
y Matches		00000000000000000000000000000000000000
7 Match Local 1784 1 1784 1 5809 5869 121	NO. 542  NO. 542  NO. 542  RENT AP  RENT AP  RELIGAT  FILING D.  F	
Simil ATGT ATGT ATGT ATGT CTGA CTGA CTGAG	42814 T: BA TIVE APPLI APPLI APPLI APION DATE ATION AT	<b>4 00044000000000</b>
larity Conserval FICAGCTTC                 FICAGCTTC FIC	ICANT: BARKER, RI EOF INVENTION: O ER OF SEQUENCES: ENT APPLICATION OF FILICATION UNMBER: LING DATE: 13-ULR ING DATE: 13-ULR ING DATE: 13-APR FILICATION NUMBER: LING DATE: 10-APR FILICATION NUMBER: LING DATE: 20-JAN PLICATION NUMBER: LING DATE: 10-UN PLICATION NUMBER: LING DATE: 01-APR PLICATION NUMBER: LING DATE: 01-APR PLICATION NUMBER: LING DATE: 26-SEP O:1: LING DATE: 26-SEP O:1:	
imilarity 99.0% Conservative Targreagerreacerer		36165 1883 1950 27050 53332 87563 975 1000 1482 1482 1482 1482 1482 1482
19.0%; 19	085 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5	4444004004004
Pred O; Pred O; N ITTGAI	7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	US-000
Mismate Mismate ATAACCA TAACCA TAACCA TAACCA TAACCA TAACCA	33 8 PRC	09-214-808 09-063-733 09-063-733 09-063-733 09-063-733 09-981-861 09-801-861 09-995-296 09-215-296 09-916-296 08-341-916 08-341-916 08-805-169 08-805-169 08-805-169 08-957-365 08-957-365 08-957-365 08-957-365
CChes	JOHN D. PROMOTERS	ו פל פל יות פלון ווווו
16 GATCA GATCA GCCAG CGCAG CGCAG	χ. 6	1
; In		
Indels  CCCAACC          TTCCCAATC           TTCCCAATC		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2; 2; AAAAT		Sequence Seq
imilarity 99.0%; Pred. No. 0; Conservative 99.0%; Pred. No. 0; Conservative 0; Mismatches 16; Indels 2; Gaps argreagerreaccererecerrataaccagreegareareacceraceaaaarggregarealeareaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreaccagerreacagerreacagerreacagerreacagerreacagerreacagerreacagerreacagerreacagerreacagagerreacagagerreacagagerreacagagerreacagagerreacagagerreacagagerreacagagerreacagagerraacagagerreacagagerreacagagerreacagagerraacagagerreacagagerreacagagerraacagagerreacagagerraacagagerreacagagerreacagagerraacagagerreacagagerreacagagerraacagagerreacagagerreacagagerraacagagerraacagagerreacagagerraacagagerreacagagerraacagagagagagagagagagagagagagagagagaga	·	4804000004444
		Appli Appli
2; 60 5868 120 5928		عَانَ مُنْ مُنْ مُنْ مِنْ مِنْ عَلَى عَمِ مِنْ ﴿ وَالْمُنْ عَلَى مُنْ مُنْ مُنْ مُنْ مِنْ مُنْ مُنْ

ち 음 ち

밁

```
6889
                                                                                                                                                                                                                                                                                                              6769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6049
7009
                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                        6709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                            106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCA
GAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA
                    GAGTCCTTCTCTCAGGGATAGAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                         GGTTTTCATGAGCGAGATATTGTGTTTGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                     CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                        TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCATTGGCGCTGGCATTTCCGGAGTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTTCCGATAGTGGACGGATCGCCTTCTTTCCGGAGGATGTTCCTAAGCCGAAGCTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACCTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                     GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                  1259
                                                                                                                                                                                           1140
                                                                                                                                                                                                                                                                       1080
                                                                                                                                                                                                                                                                                                              6828
                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                        6768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6048
                                                                                                                                                     6948
                                                                                                                                                                                                                                 6888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
```

S

밁

8 8 8 8 8 8 8 8 8

문

```
Ş
                                                                                                                                                   밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
밁
                 δ
                                                뭐
                                                                                                  밁
                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                      1800
                                                                         1740
                                                                                                    7488
                                                                                                                            1680
                                                                                                                                                      7428
                                                                                                                                                                              1620
                                                                                                                                                                                                                                                         7308
                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                            7248
                                                                                                                                                                                                                                                                                                                                   1440
                                                                                                                                                                                                                                                                                                                                                                                                                7128
                                                                                                                                                                                                                                                                                                                                                                                                                                         1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1260
                                                 7548
                                                                                                                                                                                                        7368
                                                                                                                                                                                                                                1560
                    -ଜୁ
                                                               TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                   TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGGCATATGACAGGATC
                                                                                                                                                                                                                                                                                                          ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
8
                                                                                                                  GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                      TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                        TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                            TCAGAAGGAAAAGACAAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                              TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                    GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                        TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCCATTGCCTGCATGCGA
                                                                                                                                                                                                                                                         TCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                      1801
                                                                                                                                                                             1679
                                                                           1799
                                                                                                                                                                                                                                 1619
                                                                                                                                                                                                                                                                                   1559
                                                                                                                                                                                                                                                                                                                                      1499
                                                                                                                                                                                                                                                                                                                                                                                        1439
                                                                                                                                                                                                                                                                                                                                                                                                                                         1379
                                                 7607
                                                                                                    7547
                                                                                                                                                      7487
                                                                                                                                                                                                        7427
                                                                                                                                                                                                                                                         7367
                                                                                                                                                                                                                                                                                                            7307
                                                                                                                                                                                                                                                                                                                                                               7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1319
```

```
RESULT 2
US-09-073-587-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/09073587
Patent No. 6286552
GENERAL INFORMATION:
APPLICANT: Li, Yi
                                                                                                                                               COUNTRY: US
ZIP: 80303
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN PC-DOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,587
FILING DATE: 06-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Li, Yi
TITLE OF INVENTION: Tr
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 6
FILING DATE: 06-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Ferber, Donna M. REGISTRATION NUMBER: 33, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                          STREET: 5370 Mar
CITY: Boulder
STATE: Colorado
                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                               E: Greenlee, Winner and Sullivan, 5370 Manhattan Circle, Suite 201
                                                                                                                                                                                                                                                                                                                                                                                                                                          Transgenic
7
33,878
3ER: 4-97
                                                                                            60/045,725
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seedless Plants
                                                                                                                                                                                                            Version
                                                                                                                                                                                                            世
                                                                                                                                                                                                                                                                                                                                                                                                     'n
```

S

중 유

5

밁

δ

B

8

```
.. .. .. .. .. .. .. .. .. .. .. .. ..
             5
                                 음 성 음
                                                                                      6 유
                                                                                                                            5 유
                                                                                                                                                                    S
                                                                                                                                                                                           g
                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; NAME/KEY:
; LOCATION:
US-09-073-587-2
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 1726; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (303) 499-8089 INFORMATION FOR SEQ ID NO: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (303) 499-8080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 2211 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                    481
 721
                  784
                                                                           601
                                                                                             664
                                                                                                                                   604
                                                                                                                                                                         544
                                                                                                                                                                                             421
                                                                                                                                                                                                              484
                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                    424
                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                                                                                                                                                                                                                                                                                                                 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                   GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                               ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                    TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                          GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAATGT
                                                                                                                                                                                           CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                     CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                 ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACCCTG
                                                                                                                                                                                                                                                                     TTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCG
                                                                                                                                                                                                                                                                                                                     TGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                             CTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                                                                                                                                                                                                                                                                                                                                                                                                  TGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                         TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                  CTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                                                                                                                                                                                                                                                                                                                                                                                        TGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
4..2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ν..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1697.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                  843
                                                                                                                                                                                                                                                    483
780
                                     720
                                                        783
                                                                           660
                                                                                            723
                                                                                                                600
                                                                                                                                  663
                                                                                                                                                    540
                                                                                                                                                                         603
                                                                                                                                                                                           480
                                                                                                                                                                                                              543
                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                              363
                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

US-08-008-216-8;
Sequence 8, Apj.
Patent No. 536.
GENERAL INFORM;
APPLICANT:
APPLICANT:

Sequence 8, Application US/08008216
Patent No. 5366887
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Pro-

David A. Ri T-DNA Promoters

```
δ
                                     유
                                                                         밁
                                                                                       S
                                                                                                                              δ
                                                                                                                                                     밁
                                                                                                                                                                    S
                                                                                                                                                                                            밁
                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                     В
 문
                                                                                                               뮍
                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
 1680
                                      1620
                                                                                                                1500
                                                                                                                                   1563
                                                                                                                                                      1440
                                                                                                                                                                         1503
                                                                                                                                                                                            1380
                                                                                                                                                                                                              1443
                                                                                                                                                                                                                                  1320
                                                                                                                                                                                                                                                   1383
                                                                                                                                                                                                                                                                      1260
                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                              1263
                                                                                                                                                                                                                                                                                                                                                  1141
                                                                                                                                                                                                                                                                                                                                                                    1204
                                                                                                                                                                                                                                                                                                                                                                                       1081
                                                                                             1623
                                                                                                                                                                                                                                                                                                                                                                                                         1144
                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1024
                                                                                                                                                                                                                                                                                                                                                                                                                                               1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGA
                                                                                                                                                    AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                      CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                          GGTGGTGGTCACATCTGGACTCGCAAATATCCCAACTCAGGCATTGCCCTGACATGCGATAC
                                                                                                                                                                                                       AGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                                                                                                                                                                                                                                                    TTTCATGAGCGAGATATTGTGTTGGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCTTGTTTTTCCTCCAGCGGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTC
                                                                           CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                           AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
                                                                                                                                                                                                                                                                                                                      TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTT
                                                                                                                 GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                            AGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                                                                                                                                                                                                                 AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
                                                                                                                                                                                                                                                                                                            TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGACGCTCCTAGTGTCGTCGAAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTC
 1738
                   1801
                                                                          1619
                                                                                                                                                                         1562
                                                                                                                                                                                                                                                   1442
                                      1679
                                                        1742
                                                                                              1682
                                                                                                                 1559
                                                                                                                                   1622
                                                                                                                                                      1499
                                                                                                                                                                                            1439
                                                                                                                                                                                                               1502
                                                                                                                                                                                                                                  1379
                                                                                                                                                                                                                                                                      1319
                                                                                                                                                                                                                                                                                         1382
                                                                                                                                                                                                                                                                                                            1259
                                                                                                                                                                                                                                                                                                                              1322
                                                                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                                                                    1262
                                                                                                                                                                                                                                                                                                                                                                                       1140
                                                                                                                                                                                                                                                                                                                                                                                                         1203
                                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                              1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
```

```
밁
                                                      र्
                                                                                         밁
                                                                                                                  ঠ
                                                                                                                                                 밁
                                                                                                                                                                             S
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                               US-08-008-216-8
                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN: Strain A4
IMMEDIATE SOURCE:
LIBRARY: Convolvulu
CLONE: Clone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: CORIGINAL SOURCE: ORGANISM: Agro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 2279 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 40.
STREET: 40.
CITY: San Diego
CTATE: California
"MSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc feature LOCATION: 1..2279
OTHER INFORMATION: /lab/
OTHER INFORMATION: /notr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                  / Match 6.8*; Score 121.6; DB 1; Length 2279;
Local Similarity 45.7*; Pred. No. 1.5e-32;
les 540; Conservative 0; Mismatches 634; Indels 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/0 FILING DATE: 25-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
   920
                                                                                          845
                                                                                                                                                    785
                                                                                                                                                                                                                                                                        665 TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                                                                                      623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92101-4297
 TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                             CCTTGACGTCGTTCGGTGTCATGCCTTTCTCCGCCAACCTTTGCCTGTCATACTATC
                                                           TCGTGGCCGAAATGGGGGGGATGCGATTTCCTCCTGCTGCATTCTGCTTGTTTTTCTTCC
                                                                                                                     CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                    GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                               GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                              GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                          GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                          CCGTTGATGAGATCCGTAGTTTTTGGGGCCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401 B Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Convolvulus arvensis plant cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRAY, CARY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        double
                                                                                                                                                                                                                                                                                                                                                                                                        /label= ORF8
/note= "Sequence ORF8 corresponds to bases 6609
through 8888 of Seq. ID No. 5366887 19. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/008,216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMES & FRYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P1020US1
                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                  Gaps
   979
                                                                                          904
                                                                                                                                                   844
                                                                                                                                                                                802
                                                                                                                                                                                                                                                                                                       682
                             964
                                                           919
                                                                                                                      859
                                                                                                                                                                                                              784
                                                                                                                                                                                                                                            742
                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                 US-08-459-569-8
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                   Sequence 8, Application US/08459569 Patent No. 5543501
                                                                      GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
                                        NUMBER OF SEQUENCES: 1
STREET: 401 B Street, CITY: San Diego
                             ADDRESSEE: GRAY, CARY,
                                                                                                                                                                                                                               1804
                                                                                                                                                                                                                                                                                                                                                 1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              965
                                                            19
              , AMES & FRYE
Suite 1700
```

```
1756 ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT 1797
                                                                                                                                                                                                                     1696 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                              TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                    GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTTATGATAAGGTGGTGGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTTGGTCCAGTTTTT 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTTGACCAGGTCATCATTGGC 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACGTGTTTGTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCAACCGAAGCTGT
                                                                                                                                               GTCACGAAGCAAAAGTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGTCGAGATCTTCAGCTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTGTTGGCTTCGCCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1039
                                                                                                                                                                                                                                                                                              1743
                                                                                                                                                                                                                                                                                                                                                                        1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1024
                                                                                                                                                                                                                        1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1204
```

1204

```
δ
                                                                              밁
                                                                                                                 δ
                                                                                                                                                          밁
                                                                                                                                                                                      S
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: 1..279
OTHER INFORMATION: /labe
OTHER INFORMATION: /note
Patent No. 5543501
OTHER INFORMATION: throu
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-459-569-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (619) 699-2700
TELEPAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 2279 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/459,569
FILING DATE: 02-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
ATTORNEY/ACENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: D
ORIGINAL SOURCE:
ORGANISM: Agro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P1020US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIBRARY: Conv
CLONE: Clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN: Strain A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Barnhorst, Marnie W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
    965
                                       920
                                                                                                                                                                                             803 CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                        785
                                                                                                                                                                                                                                                                   743 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                  725 GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                       683 GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                              665 TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                           623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92101-4297
  TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAC
                                     TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                            CCTTGACGTCGTGTCATGCCTTTCTCCGCCAACCTTTGCCTGTCATACTATC
                                                                                                                 rcerecceanareeeeecearecearrecrecrecarrerecrecrerrerrerec
                                                                                                                                                                                                                                      GCCTTGTTGCCGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                          CCGTTGATGAGATCCGTAGTTTTGGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Convolvulus arvensis plant cells
lone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Agrobacterium rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.8%;
45.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           through 8888 of Seq. ID No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Sequence ORF8 corresponds to bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= ORF8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 121.6; DB 1; Length 2279; Pred. No. 1.5e-32; 0; Mismatches 634; Indels 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5543501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8;
  1024
                                       979
                                                                                                                                                          904
                                                                                                                                                                                                                                      844
                                                                                                                                                                                                                                                                             802
                                                                              964
                                                                                                                   919
                                                                                                                                                                                                 859
                                                                                                                                                                                                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                         742
                                                                                                                                                                                                                                                                                                                                                                                              724
                                                                                                                                                                                                                                                                                                                                                                                                                                       682
                                                                                                                                                                                                                                                      RESULT 5
US-08-458-831-8
                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                             Sequence 8, Application US/08458831
Patent No. 5824866
                                                                                        GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
STATE: C
COUNTRY:
              CITY: San Diego
STATE: California
                                                         STREET:
                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                      1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT
                                                                                                                                                                                                                                                                                                                                                                           ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT 1797
                                                                                                                                                                                                                                                                                                                                                                                                                  GTCACGAAGCAAAAGTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG 1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGATTTCGAGGCTTTCGGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC 1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG 1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                     E: GRAY, CARY
                                                                          CARY,
                                                         Suite
                                                                            AMES
                                                                                                                                                                                                                                                                                                                                      1845
```

1683

1695

1623

1395

1144

1324 1275

```
NAME/KEY: misc_feature
LOCATION: 1.2279
COTHER INFORMATION: /labe
OTHER INFORMATION: /note
Patent No. 5824866
OTHER INFORMATION: throu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-458-831-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 02-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 2279 base pairs
TYPE: nucleic acid
STPANFORMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: doub
TOPOLOGY: linear
MOLECULE TYPE: DNA
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/458,831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN: Strain A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 540; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLONE: Clone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIBRARY:
                                                                                        920
                                                                                                                                                                                                                                845
                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                           785
                                                                                                                                                                                                                                                                                                                                                                                                                    725 GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            665 TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       623 TCGACTTGCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                          TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                   TCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTTTTTCTTCC
                                                                                                                                                                                                                                CCGTTGATGAGATCCGTAGTTTTGGGGCCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                           CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                                                                           GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                                                                                                                                                                                                                      GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
  ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT 1039
                                                                                                                                        TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Convolvulus arvensis plant cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agrobacterium rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    236-1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.8%; Score 121.6; DB 1; 45.7%; Pred. No. 1.5e-32; tive 0; Mismatches 634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     through 8888 of Seq. ID No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Sequence ORF8 corresponds to bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= ORF8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5824866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6609
                                                                                                                                                                                                                                                                                                                           844
                                                                                                                                        964
                                                                                                                                                                                     919
                                                                                                                                                                                                                                904
                                                                                                                                                                                                                                                                              859
                                                                                                                                                                                                                                                                                                                                                                        802
                                                                                                                                                                                                                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         682
                                                                                             US-vo-vo-
Sequence 19, Applicant
Patent No. 5366887

Patent No. 5366887

PAPLICANT: Slightom, Jerry L.
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
PITLE OF INVENTION: Ri T-DNA Promoters
UMMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSE: GRAY, CARY, AMES & FRYE
ADDRESSEE: GRAY, CARY, Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                 US-08-008-216-19
COMPUTER READABLE FORM:
                          COUNTRY: USA
ZIP: 92101-4297
                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1040 TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1025 CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACGTGTTTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT 1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCACGAAGCAAAAGTTTTTGGGTTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG 1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GIGICTGIGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGATITCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC 1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
```

1743 1695 1683

1563

밁 Ş 밁 δ 밁 δ 밁 Ş 밁 á 밁 १

```
TELEFAX: (619) 236-1048 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: DNA HYPOTHETICAL: NO ORIGINAL SOURCE:
PEATURE:
NAME/KEY: misc_feature
LOCATION: 9748..10044
OTHER INFORMATION: /lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:

NAME/KEY: misc feature

LOCATION: complement (937...

OTHER INFORMATION: /label=
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN: Agrobacterium rhizogenes
STRAIN: STRAIN A4
IMMEDIATE SOURCE:
LIBRARY: CONVOLVULUS ARVENSIS PLANT
CLONE: CLONE 7
PEATUP P.
                                                                                                                                                                                                                          FEATURE:

NAME/KEY: misc feature

LOCATION: complement (5071..5643)

OTHER INFORMATION: /label= ORF7SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 21126 base pai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.
CURRENT APPLICATION DATA:
                                                                                                                                       FEATURE:
                                                                                                                                                                                                             EATURE:
                                                                                                                                                                                                                                                                                                                                                          EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                            NAME/KEY: misc_fea
LOCATION: 6609..88
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: complement (4607..4918)
OTHER INFORMATION: /label= ORF5SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: complement (2649)
OTHER INFORMATION: /label=
                                                                             NAME/KEY: misc_feature
LOCATION: complement (6576
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: complement (4041..4400)
OTHER INFORMATION: /label= ORF4SUBSEQUENCE
                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
LOCATION: 3726..4799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 25-JAN CLASSIFICATION: 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 21126 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Barnhorst, Marnie W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
COMPUTER: IF
                                                                                                                                                                                                                                                                                       misc_feature
5143..6216
RMATION: /label= ORF6SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONVOLVULUS ARVENSIS PLANT CELLS
                                                                                                                                                                       misc_feature
6609..8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label=
                                                                                                                                                      /label= ORF8SUBSEQUENCE
         /label= ORF10SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 06/725,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/008,216
                                                                                                  (6576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (2649.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19:
                                                                             .6830)
ORF9SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORF3SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORF2SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2262)
ORF1SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .3458)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .25
```

```
Ś
                                                                           밁
                                                                                                           Ś
                                                                                                                                                    밁
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-008-216-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 45.7
Matches 540; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_fea
LOCATION: compleme
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: complement (18177..18743)
OTHER INFORMATION: /label= ORF17SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: complement (17737..18189)
OTHER INFORMATION: /label= ORF16SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: 15659..16210
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: 13723..14319
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: 12466..13002
OTHER INFORMATION: /lak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: complement (1050:
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: compleme OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                      1100
                                                                                                                                                                                                                                                                                                                                                                                          7453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7393
                                                                                                                                                        7633
                                                                                                                                                                                                                                 7573
                                                                                                                                                                                                                                                                                                               7513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7273
7753 GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                        920
                                                                                                                                                                                                                                                                                                                                                                                                                               803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                      CACTATATTTCCGCCAGAAACGCTACGCATGGCÁCGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                    TTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG 1159
                                                                                                                                                                                                                                                                                                             CCTTGACGTCGTGTCATGCCTTTCTCCGCCAACCAACTTTGCCTGTCATACTATC
                                                                                                                                                                                                                                                                                                                                               rcerecceanarececcarrecarrectecrecarrerecrecarrererrerrer
                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                               TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                           ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                      TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                          CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                         TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                 TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAC 7632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
complement (19031..19390)
RMATION: /label= ORF18SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
complement (1651;
DRMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
15659..16210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (10509..11282)
|abel= ORF11SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (16517.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches 634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 121.6; DB 1
Pred. No. 8.4e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7..17545)
ORF15SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORF14SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORF13SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORF12SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 21126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

7692 1039

7752

7812

7512

859

7452

7392

742

802

7332

682 ω ••

7572

919

```
RESULT 7
US-08-459-569-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 19, Application US/08459569
Patent No. 5543501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
COMPUTER: ISM PC COMPATION
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
               APPLICATION NUMBER: US/08/459,569
FILING DATE: 02-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
                                                                                                                                                                                                                                                                                                                                        STREET: 401 B Street,
CITY: San Diego
STATE: California
                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1696 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1336 GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG 1395
                                                                                                                                                                                                                                                                                                 92101-4297
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGATTGAAGGTATGCTTGAAACACGGTCATTCGCCGTGTTTTTGACCAGGTCATCATTGGC 8231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 8111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 8051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCACGAAGCAAAAGTTTTTGGGTTAACTCCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT 7872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                     GRAY, CARY,
25-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                              Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                                                     AMES & FRYE
                                                                                                                                                                       Version
                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7932
```

á

밁 ঠ

S 밁 5 밁 밁 á 문 5 문 ş 밁 Ś

ঠ 밁 5

밁

밁

```
TELEFAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 21126 base pairs
                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: complement (6576...)
OTHER INFORMATION: /label= 0)
FEATURE:
NAME/KEY: misc_feature
LOCATION: 9748..10044
OTHER INFORMATION: /label= 0)
                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 5143..6216
OTHER INFORMATION: /label= 01
FEATURE:
NAME/KEY: misc_feature
LOCATION: complement (5071...
OTHER INFORMATION: /label= 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: D
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Agro
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:

NAME/KEY: misc_feature

FORATION: 5143..6216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLONE: CLONE 7

FEATURE:
NAME/KEY: misc feature
LOCATION: complement (937..2262)
OTHER INFORMATION: /label= ORFISUBSEQUENCE
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: complement (4041..4400)
OTHER INFORMATION: /label= ORF4SUBSEQUENCE
PEATURE:
NAME/KEY: misc_feature
LOCATION: complement (4607..4918)
OTHER INFORMATION: /label= ORF5SUBSEQUENCE
                              FEATURE:

NAME/KEY: misc feature
LOCATION: 12466..13002
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                             OTHER INFORMATION:
FEATURE:
NAME/KEY: misc_fea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE: misc_feature LOCATION: 3726.4799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMMEDIATE SOURCE:
LIBRARY: CONVOLVULUS ARVENSIS PLANT CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: complement (2649)
OTHER INFORMATION: /label=
                                                                                                      NAME/KEY: misc_feature
LOCATION: complement (10509..11282)
OTHER INFORMATION: /label= ORF11SUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Agrobacterium rhizogenes STRAIN: STRAIN A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 21126 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Barnhorst, Mai
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
misc_feature
                                                                                                                                                                                                                                                                                                                                      misc_feature
6609..8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (619)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                 .8888
N: /label= ORF8SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marnie W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 06/725,368
                                                                                                                                                                                                                                                                 (6576..6830)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (2649..3458)
label= ORF2SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36,740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P1020US1
                                    ORF12SUBSEQUENC
                                                                                                         ORF11SUBSEQUENC
                                                                                                                                                                           ORF10SUBSEQUENC
                                                                                                                                                                                                                                                ORF9SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                         ORF7SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORF6SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORF3SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                         .5643)
```

8171

```
US-08-459-569-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: complement (17737...18189)
OTHER INFORMATION: /label= ORF16SUB
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc feat
LOCATION: complemer
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: complement (18177..18743)
OTHER INFORMATION: /label= ORF17SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAATGTTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION: /label= ORF13SUBSEQUENC
ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT
                                                                                                                                                GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                               TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                             TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                       TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                              CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTTTTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                       TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                               TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                        CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                      ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTGACGTCGTGTCATGCCTTTCTCCGCCAACCAACTTTGCCTGTCATACTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
15659..16210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13723..14319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lement (19031..19390)
DN: /label= ORF18SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 121.6; DB 1;
Pred. No. 8.4e-32;
0; Mismatches 634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORF16SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORF15SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORF14SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                634; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 21126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
*•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                       7932
                                                                                 1275
                                                                                                                                                                  1219
                                                                                                                                                                                                                                                                                                                                       1099
                                                                                                                                                                                                                                                                                                                                                                                7692
                                                                                                                                                                                                                                                                                                                                                                                                                        1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7332
                                                                                                                          7872
                                                                                                                                                                                                         7812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-458-831-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 19, Application Patent No. 5824866
                                                                                                               CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL
                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
                 TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                         NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 401 B St
                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/0. FILING DATE: 02-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 92101-4297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8412 CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT 8453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1696 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1576 TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCACGAAGCAAAAGTTTTTGGGTTAACTCCCGGCATCCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTGCCCTGAAGGAATCTCAGGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 8051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: GRAY, CARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08458831
                                                                                                                                                                                                                                                                                           US/08/458,831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Suite 1700
                                                                                                                                                                                                                                                                                                                                       #1.25
```

8411 1755 8351 1695 1635

ঠ

밁 ઈ 밁

밁

Ś

밁 S 밁 Ś 5

밁

Ś

밁

á

밁 á 밁 Ś 밁 ş

유

```
LENGTH: 21116 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Agrobacterium rhizogenes
STRAIN: STRAIN A4
IMMEDIATE SOURCE:
LIBRARY: CONVOLVULUS ARVENSIS PLANT CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
NAME/KEY: misc_feature
LOCATION: complement (937...2262)
OTHER INFORMATION: /label= ORF18UBSEQUENCE
FEATURE:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:

NAME/KEY: misc feature

LOCATION: complement (6576.

OTHER INFORMATION: /label= (
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:

NAME/KEY: misc_feature

LOCATION: complement (5071..5643)

OTHER INFORMATION: /label= ORF7SU

FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature LOCATION: 3726.4799 OTHER INFORMATION: /lak FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: 9748..10044
OTHER INFORMATION: /label= ORF10SUBSEQUENC
FEATURE:
NAME/KEY: misc feature
LOCATION: complement (10509..11282)
OTHER INFORMATION: /label= ORF11SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                            FEATURE:

NAME/KEY: misc feature

LOCATION: 15659..16210

OTHER INFORMATION: /label=
                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: 12466..13002
OTHER INFORMATION: /label= ORF12SUBSEQUENC
FEATURE:
                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                       NAME/KEY: misc feat
LOCATION: 13723..14
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: 6609..8888
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc feature
LOCATION: complement (4607..4918)
OTHER INFORMATION: /label= ORF5SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: complement (4041..4400)
OTHER INFORMATION: /label= ORF4SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature
LOCATION: complement (2649..3458)
OTHER INFORMATION: /label= ORF2SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: /label= ORF6SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLONE: CLONE 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
5143..6216
misc feature complement (16517..17545)
                                                                                                                                                               misc_feature
13723..14319
                                                                                                                                           /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= ORF3SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORF9SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORF8SUBSEQUENCE
                                                              ORF14SUBSEQUENC
                                                                                                                                             ORF13SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORF7SUBSEQUENCE
```

```
В
                                                                                                                                                                                                                                                      ₿
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                            5
                                                                                                                   밁
                                                                                                                                                                                뭐
                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-458-831-19
                 S
                                                В
                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 45.7
Matches 540; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: complement (17737
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: complement (19031..19390)
OTHER INFORMATION: /label= ORF18SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: complement (18177..18743)
OTHER INFORMATION: /label= ORF17SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
                                                                                                                                                                                                                      1220
                                                                                                                                                                                                                                                                                       1160
                                                                                                                                                                                                                                                                                                                                                         1100
                                                                                                                                                                                                                                                                                                                                                                                          7693
                                                                                                                                                                                                                                                                                                                                                                                                                           1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7393
                                                                                                                    7933
                                                                                                                                                    1276
                                                                                                                                                                                     7873
                                                                                                                                                                                                                                                                                                                        7753
                                                                                                                                                                                                                                                                                                                                                                                                                                                             7633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7333 GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7273 TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
1396 ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rceaecerraceeccrercriceareaeeccerrcccaaarccceecacaerceacacrer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcereecceanareeeeeeearecearrecerecrecarrererrerrerrer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gcrrcrrrccgeaegargrrccraaecceaaagregcegrcarregcecregcarrrcce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                  ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT 1335
                                                                                                                                                                                                               TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                           GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAG 7632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGTTGATGAGATCCGTAGTTTTGGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGTGATCGTGT---TGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTGTTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA 7452
                                                  AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                  GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                     TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                      CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                      TTGTGTTGGCTTCGCCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                          TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                    ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.8%; Score 121.6; DB 1;
45.7%; Pred. No. 8.4e-32;
ative 0; Mismatches 634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= ORF15SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (17737..18189)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORF16SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                       7872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     682
                                                                                     1395
                                                                                                                                                                                                                        1275
                                                                                                                                                                                                                                                                                                                           7812
                                                                                                                                                                                                                                                                                                                                                             1159
                                                                                                                                                                                                                                                                                                                                                                                              7752
                                                                                                                                                                                                                                                                                                                                                                                                                           1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                             7692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω.
```

```
RESULT 10
US-09-103-840A-2
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Scomber japonicus
US-09-230-388-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
US-09-230-388-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
Sequence 2, Application US/09103840A
Patent No. 6294328
GEMERAL INFORMATION:
APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: WHITE, Owen R.
APPLICANT: WHITE, Owen R.
APPLICANT: PRASER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/09230388 Patent No. 6291644
                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Iwamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/230,388
CURRENT FILING DATE: 1999-01-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Iwamoto, Mitsunori; Jung, Sang-Kee
TITLE OF INVENTION: NOVEL PROTEIN, ITS GENE, REAGENTY
TITLE OF INVENTION: APAPTOSIS, AND ANTICANCER AGENTS
FILE REFERENCE: 4703/0F214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match 2.1%;
Local Similarity 66.1%;
les 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8232
                                                                                                                                                                                                                                                                            242 CAGG---ACACACGGTAACCATATTGGAGGCTAATGATCGTGTTGGAGG
                                                                                                                                                                                                                                                                                                              773 CTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGG 821
                                                                                                                                                                                                                                                                                                                                                         182 ATGTGGTTATAGTCGGAGCTGGCATGGCCGGACTGACGGCGGCCAAGTTACTGCAAGACG
                                                                                                                                                                                                                                                                                                                                                                                           713 AAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGAT 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCGCCAGCT 8453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCACGAAGCAAAAGTTTTTGGGTTAACTCCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGTCTGTGAGCCAGCGCATATGCCCATGTTCAAGTCAGGCGATTCAGAAGGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/JP98/02261
                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 38.6; DB 3
Pred. No. 0.0092;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; Length 1575;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REAGENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOR INDUCING
                                                                                                                                                                                                                                                                            287
                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8171
                                                                                                                                                                                                                                                                                                                                                                                               772
                                                                                                                                                                                                                                                                                                                                                         241
```

```
US-09-415-277C-4/c
                                                                                                                                                                               RESULT 12
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: FLEISCHWAN, Robert D.
APPLICANT: WHITE, Owen R.
APPLICANT: WHITE, Owen R.
APPLICANT: YENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION UNMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-103-840A-2
GENERAL INFORMATION:
APPLICANT: Hersbberger, Charles
APPLICANT: Payson, Robert
TITLE OF INVENTION: Ketoreductase Gene and
FILE REFERENCE: X-11325A
CURRENT APPLICATION NUMBER: US/09/415,277C
                                                                                                                    Sequence 4, Application US/09415277C Patent No. 6531308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09103840A Patent No. 6294328
                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 2.1%;
Best Local Similarity 57.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Mycobacterium tuberculosis OTHER INFORMATION: H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 4411529
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various
OTHER INFORMATION: represent a, t, c or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 4403765
                                                                                                                                                                                                                                                                                                                993866 CCGACGGTTGCCGTGGTCGGAGCGGGTATGTCCGGAATGTGCGTCGCAATTACGTTGCTG 993925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       993867 CCGACGGTTGCCGTGGTCGGAGCGGGTATGTCCGGAATGTGCGTCGCAATTACGTTGCTG 993926
                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                709 CCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         769 CATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                                                                                                                                                                                                                                                                                                                             67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67;
                                                                                                                                                                                                                                                                CATGCTGGGGTAGACGATGTTACAATATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                                                                                                                                                                                                                                                                                      CCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTT 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCGCAGGGATTACTGATGTCTGCATCTATGAAAAAGGCCGACGATGTTGGCGGAACG 993983
                                                                                                                                                                                                                                       AGCGCAGGGATTACTGATGTCTGCATCTATGAAAAGGCCGACGATGTTGGCGGAACG 993982
                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.1%;
                                                                                                                                                                                                                                                                                                                                                                                           ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                               Score 37; DB 3; Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             positions throughout the sequence {\bf g}
                                            Protein from Yeast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANALYSIS
                                                                                                                                                                                                                                                                                                                                                                                           50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50;
                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4411529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 4403765;
                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MYCOBACTERIUM
                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                768
                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
ફ
                                                                                                                                                                          ફ
                                                                                                                                                                                                                                                                                                                                                               ; SEQ ID NO 6; LENGTH: 1032; TYPE: RNA; ORGANISM: 8. Cerevisiae US-09-415-277C-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
RESULT 14
US-09-404-627-3
                                                                         밁
                                                                                                                                            밁
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-415-277C-6/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-415-277C-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, Application US/09415277C Patent No. 6531308 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DATE: 1999-10-08
PRIOR APPLICATION NUMBER: US 09/182,985
PRIOR FILING DATE: 1998-10-30
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 2.0%;
Best Local Similarity 53.7%;
Matches 73; Conservative
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/415,277C CURRENT FILING DATE: 1999-10-08 PRIOR APPLICATION NUMBER: US 09/182,985 PRIOR FILING DATE: 1998-10-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Hershberger, Charles
APPLICANT: Payson, Robert
TITLE OF INVENTION: Ketoreductase Gene and Protein
FILE REFERENCE: X-11325A
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: (1)..(10
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: s. cerevisiae
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1032
                                                                                                                                                                                                                                                                                                           Local
                                                                                                          1618 GATACCAATATTTTC 1633
                                                                                                                                                                               1558 GATAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGC 1617
                                                                                                                                                                                                                                                       1498 ATTCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1618 GATACCAATATTTTTC 1633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1558 GATAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1498 ATTCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTAT 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   504 AÄAGTAÄGCÄTTTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        564 GTGATCTTCATTCTCTTTTGTGAACTCCCAGGCAGCCTTTTCAGCAAACTTCTTGGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              624 ATCGAAAAGTTGAGGACCAAAAAGAAGAGAGAGGGTTGACTGTTGTTAGTTTGAATTTGAT
                                                                                                                                                                                                                                                                                                         similarity 53.7%;
                                                                                                                                              GTGATCTTCATTCTCTTTTGTGAACTCCCAGGCAGCCTTTTCAGCAAACTTCTTGGATGC
                                                                                                                                                                                                                     ATCGAAAAGTTGAGGACCAAAAAGAAGAGAGGGTTGACTGTTGTTAGTTTGAATTTGAT
                                                                         AAAGTAAGCATTTATC
                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .. (1032)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         version 3.1
                                                                         489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 35.2; DB Pred. No. 0.11;
                                                                                                                                                                                                                                                                                                         Score 35.2; DB Pred. No. 0.11;
                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
                                                                                                                                                                                                                                                                                                                          DB 4;
                                                                                                                                                                                                                                                                                          63; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63;
                                                                                                                                                                                                                                                                                                                            Length 1032;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1032;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                        1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        505
                                                                                                                                                                                                                     565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              565
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

Sequence

Application US/09404627

```
GENERAL INFORMATION:
APPLICANT: Luo, Ying
APPLICANT: Huang, Betty
TITLE OF INVENTION: No. 6387658el PCNA-ASSC
TITLE OF INVENTION: and Methods of Use
FILE REFERENCE: A68291/DJB/RMS/DAV
CURRENT APPLICATION NUMBER: US/09/404,627
CURRENT FILING DATE: 1999-09-23
NUMBER OF SEQ ID NOS: 11
                                                                                                                   Ş
                                                                                                                                                               문
                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                             ; SOFTWARE: PatentIn Ver.
SEQ ID NO 1
LENGTH: 4205
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
Search completed: November 23, 2003, 21:27:11 Job time : 119.342 secs
                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                            US-09-404-627-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-404-627-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-404-627-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 6387658
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/09404627 Patent No. 6387658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Luo, Ying
APPLICANT: Huang, Betty
TITLE OF INVENTION: No. 6387658el PCNA-Associated Cell Cycle Proteins,
TITLE OF INVENTION: and Methods of Use
FILE REFERENCE: A68291/DJB/RMS/DAV
CURRENT APPLICATION NUMBER: US/09/404,627
CURRENT FILING DATE: 1999-09-23
NUMBER OF SEQ ID NOS: 11
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 3593
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1563 GGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACA 1614
                                                                                                                       1563 GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACA 1614
                                                                                                                                                                 3009 GAGAAAAAATTAAAAAATACAGATAAAACATTGCATTTTACAGAATGTCACAGAATCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2457 GATAGTGATGTCATCTGTCCTACACAATACACAACTGAGAGATTCCCCGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2397 GAGAAAAAATTAAAAATACAGATAAACATTGCATTTTACAGAATGTCACAGAATCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1503 GAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA 1562
                                                                                                                                                                                                       1503 GAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA
                                                                                                                                                                                                                                            64;
                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Ver. 2.1
                                                                                 GATAGTGATGTCATCTGTCCTACACAATACACAACTGAGAGATTCCCCGACA 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.0%;
                                                                                                                                                                                                                                                               2.0%; Score 35.2; DB 57.1%; Pred. No. 0.33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6387658el PCNA-Associated Cell Cycle Proteins, Compositions
                                                                                                                                                                                                                                            <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 35.2; DB Pred. No. 0.29;
                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48;
                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                    Length 4205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 3593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                         1562
                                                                                                                                                                   3068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Compositions
                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
 10
11
12
12
13
14
16
                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                Published Applications NA:*

1: /cgn2_6/ptodata/1/pubpna/US07 PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/US06 NEW PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06 NEW PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US07 NEW PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US08 NEW PUB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08 PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US08 PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09E PUBCOMB.seq:*

11: /cgn2_6/ptodata/1/pubpna/US09E PUBCOMB.seq:*

12: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

13: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

14: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

15: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

16: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

17: /cgn2_6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

16: /cgn2_6/ptodata/1/pubpna/US10B.seq:*

17: /cgn2_6/ptodata/1/pubpna/US10B.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                  Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     November 23, 2003, 19:44:15 ; Search time 557.252 Seconds (without alignments)
10562.608 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2169961 segs, 1634102185 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-434-837-10_COPY_1_1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    atgtcagcttcacctctcct.....ctatgagtcgcaggatccga 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Copyright
2268
1807
18049
10049
10049
10049
10049
10049
10049
10049
10049
10049
10049
10049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                      B
            US-10-187-339-10
US-10-187-339-9
US-10-187-339-9
US-10-140-472-358
US-10-141-761-358
US-10-142-885-358
US-10-140-805-358
US-10-140-805-358
US-10-140-805-358
US-10-140-923-358
US-10-141-756-358
US-10-141-756-358
US-10-141-756-358
US-10-141-756-358
US-10-141-756-358
US-10-141-756-358
US-10-141-756-358
                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mode1
                                                                                                                                                                                                                                                                                 Description
                                           Sequence
              Sequence
Sequence
          10 Appl
7, Appli
9, Appli
9, Appli
1358 App
358, App
                                          S
                                                                              밁
                                                                                                          Ś
                                                                                                                                            В
                                                                                                                                                                           Ş
                                               121
               121
```

18 37 2.1 1007 13 US-10-027-632-0540 19 37 2.1 161652 15 US-10-021-632-10540 20 36.2 2.0 3758 11 US-09-948-820-42 21 36 2.0 671 14 US-10-184-644-346 22 36 2.0 671 14 US-10-184-634-346 22 35.6 2.0 3055 12 US-10-027-632-177179 24 35.6 2.0 3055 13 US-10-027-632-177179 25 35.2 2.0 1032 9 US-09-415-277A-6 26 35.2 2.0 1032 9 US-09-415-277A-6 27 35 1.9 368004 10 US-09-946-654-3 28 34.4 1.9 2188 14 US-10-168-274-30 34.4 1.9 2182 12 US-10-20-351-16 30 34.4 1.9 2291 12 US-10-20-351-17 31 34.4 1.9 2291 12 US-10-320-351-17 32 34.4 1.9 2291 12 US-10-320-351-17 33 34.4 1.9 2585 12 US-10-320-351-17 34 34 1.9 585 12 US-10-20-7632-217634 36 31 1.9 1302 9 US-09-815-66-29 37 38 3.8 1.9 1302 9 US-09-815-242-9647 38 33.6 1.9 413 14 US-10-184-644-156 40 33.6 1.9 413 14 US-10-184-644-156 41 33.4 1.9 708 12 US-10-103-313-225 42 33.4 1.9 708 12 US-10-103-313-225 43 33.4 1.9 708 12 US-10-140-472-298 44 33.4 1.9 708 12 US-10-140-472-298 45 33.4 1.9 708 12 US-10-140-472-298 45 33.4 1.9 708 12 US-10-1288-298 45 33.4 1.9 708 12 US-10-1288-298				0000 0
37 2.1 161652 13 37 2.1 161652 15 36 2.0 3758 11 36 2.0 671 14 36 2.0 3055 13 3.2 2.0 1032 9 3.2 2.0 1032 9 3.2 2.0 2180 14 4 1.9 2188 11 4 1.9 2291 12 4 1.9 2291 12 4 1.9 2585 13 34 1.9 585 12 34 1.9 1585 12 34 1.9 1585 12 34 1.9 1745 12 34 1.9 1768 12 34 1.9 1768 12 36 1.9 1094 14 3708 12 3708 12		2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7 8 9 0 0 4 3 2 4 3 8 7 6	8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
.1 1007 .1 161652 .1 161652 .1 161652 .1 671 .0 671 .0 3055 .0 1032 .9 368004 .9 2180 .9 2180 .9 2191 .9 219			$\omega \omega \omega \omega \dots \dots \omega$	$\dots$
1007 1007 1107 1107 1107 111 1107 1103 1104 105 105 105 105 105 105 105 105			000000000000000	440000000
		1302 413 413 1094 708 708 708 708	L.)	
US-10-027-632-10540 US-09-948-820-42 US-10-184-644-346 US-10-184-644-346 US-10-184-634-346 US-10-027-632-177179 US-09-415-277A-4 US-09-949-654-3 US-09-949-654-3 US-10-108-274-30 US-10-108-274-30 US-10-108-274-30 US-10-108-274-30 US-10-108-274-30 US-10-108-274-30 US-10-108-274-30 US-10-240-453-205 US-10-320-351-16 US-10-320-351-17634 US-10-027-632-217634 US-10-027-632-217634 US-10-184-644-156 US-10-184-644-156 US-10-1133-313-225 US-10-140-472-298 US-10-141-761-298 US-10-142-885-298 US-10-158-790-298		112 112 112 112		13 14 14 12 13
	ALIGNMENTS	US-U9-815-242-9947 US-10-184-634-156 US-10-184-634-156 US-10-103-313-225 US-10-140-472-298 US-10-141-761-298 US-10-142-885-298 US-10-142-885-298 US-10-158-790-298	US-09-949-654-3 US-10-108-274-30 US-10-103-313-86 US-10-240-965-134 US-10-320-351-16 US-10-320-351-17 US-10-240-453-205 US-10-032-585-6692 US-10-027-632-217634 US-10-230-0266-29	US-10-027-632-10540 US-10-081-327-40 US-99-948-820-42 US-10-184-644-346 US-10-184-634-346 US-10-027-632-177179 US-10-027-632-177179 US-09-415-277A-6 US-09-415-277A-6

## ; Sequence 10, Application US/10187339 ; Publication No. US20030084478A1 ; GENERAL INFORMATION: APPLICANT; Ream, Walt et al., TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and TITLE OF INVENTION: Methods and Compositions for Producing the Sa ; FILE REFERENCE: 53629 ; CURRENT APPLICATION NUMBER: US/10/187,339 ; CURRENT FILING DATE: 2002-06-28 pRIOR APPLICATION NUMBER: US/09/434,837 ; PRIOR APPLICATION NUMBER: US/09/434,837 ; PRIOR APPLICATION NUMBER: 60/107,185 ; RIOR FILING DATE: 1999-11-04 ; PRIOR FILING DATE: 1998-11-05 ; NUMBER OF SEQ ID NOS: 12 TYPE: DNA GRGANISM: Agrobacterium tumefaciens US-10-187-339-10 SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 10 Query Match 100.0%; Score 1801; Best Local Similarity 100.0%; Pred. No. 0; Matches 1801; Conservative 0; Mismatches LENGTH: 2268 13 13 CGAGAAGCTTCTAGGGGAAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA CTGACAATGGTCGATAAGGCGGATGAATTGGAACCGCAGGGTTTCCGATGCCTTCTTAGAA 120 CGAGAAGCTTCTAGGGGAAGGAGTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA BB 14; o ;; Indels Length 0; Gaps 120 180 60

```
1021
                                                                                                                                                                                       1081
                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                                               196
                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                         106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG 1320
                                                         GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAA
                                                                                                                                  TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                             GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                        CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                  CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATTGGACTTGGACACCATTTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCCAGCTGGTGGAAAAGGTAGCA
                                                                                                            TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                       GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                   TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATTTCTCCGAAGCACCAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTAGAAAGGTAGCA
                                                                       1260
                                                                                                                                                  1200
                                                                                                                                                                                                                           1140
                                                                                                                                                                                                                                                                                                    1080
                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                              1200
                                                                                                                                                                                       1140
                                                                                                                                                                                                                                                                   1080
                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                   1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                     960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
```

Ş

문

ક

유 성

В

중 음 중 음

Ş

음 성 음 성 음

S

á

유 성 유

В

á

유

밁

8 8 8 8 8 8 8 8 8 8

```
CURRENT APPLICATION NUMBER: US/10/187,339
CURRENT FILING DATE: 2002-06-28
PRIOR APPLICATION NUMBER: US/09/434,837
PRIOR FILING DATE: 1999-11-04
PRIOR APPLICATION NUMBER: 60/107,185
PRIOR FILING DATE: 1998-11-05
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PATENTIN VET: 2.0
SEQ ID NO 7
LENGTH: 1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
               S
                                            밁
                                                                       S
                                                                                                                                                                      ; TYPE: DNA
; ORGANISM: Agrobacterium tumefaciens
US-10-187-339-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-10-187-339-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                   Sequence 7, Application US/10187339
Publication No. US20030084478A1
GENERAL INFORMATION:
APPLICANT: Ream, Walt et al.,
TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and
TITLE OF INVENTION: Methods and Compositions for Producing the
FILE REFERENCE: 53629
                                                                                                          Query Match
Best Local Similarity
Matches 1788; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1261 CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1561
                   72
                                               18
                                                                             12
CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                 Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ·Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAATATTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTTAAGAGCGGGGATATCTGAACTTTTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGAAAATCAGCGGATGTGCCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCT
                                               ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGTGGTTAACGGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1801
                                                                                                           Conservative
                                                                                                                        99.3%;
                                                                                                           0,
                                                                                                          Score 1788; D; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                      Compositions for Producing the
                                                                                                                                         DB
                                                                                                                                         14;
                                                                                                          0,
                                                                                                           Indels
                                                                                                                                        Length
                                                                                                                                         1807;
                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                      Same
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1320
                    131
                                                 77
                                                                             71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1500
                                                                                                           0
```

AGGGAAGGAAGGAGGAAGGAGGAAGGAGGAAGGAGGAAGGAGGAAGGAGGAAGGAGGAGGAAGGAGA	
GGAAGGAA GGAAGGAA GCCGATGG GCCGATGG GCCGATGG GCATTGAG ACAGTGAGA ACAGTGAGA ACAGTGAGA CATTTGAG CATTTGAG CATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTGA CCATTTCCG CCATTCCG CCATTTCCCATTCC CCATTTCCCATTCC CCATTTCCCATTCC CCATTTCCCATTCC CCATTTCCCATTCC CCAT	78 C
AGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG	GATAAGG
	6 6 6 6 7
	ATGAA
JATTACTCAAM  INCOCCING	AATTGGA
GATTACTCAAAGCTCCACC GATTACTCAAAGCTCCACC TGGCTTCCCCGAGATCTCAC TGGCTTCCCCGAGATCTCAC TGGCTAGAAGTTCTCGGGGGGGGGG	ATGAATTGGACCGCAG GGATTACTCAAAGCTC
TRACEGATION  TOGATE  T	AGGGTTT
TRACTICAAAGCTCCACCGAGTGCAGGGTTAAGCTTTCCCCGAGATCCTAGCTGGTGCAAAAGGTAGCAGTTCCTCCCGAGATCCTAGCTGGTGGAAAAGGTAGCAGTTCCTTCC	GGTTTCCGATGCCTTCTTAGAACGAG CACCGAGTGCAGCGCTGGGTTAGCTT 
TGCAGCCTTGGATA  GTTGAAAGGTAGCA  ATACTTGAAAGATTGCAAA  ATACTTGAAAGATTGCAAA  ATACTTGAAAGATTGCAAA  ATACTTGAAAGATTGCAAA  ATACTTGAAAGATTGCAAAC  GCGGCTTTAACATTTGCAACC  GCGGGTTTAACAATTTGCAACC  GCGGTTTAACAATTTGCAACC  GCGGTTTAACAATTTGCAACC  GCGGTTTTACCATAACC  TTTACCATAACC  TTTTTTTTTGACCAA  AGCCGGTTTTTTTTTT	AGCGC
	CTTAGAAC
JERGETTAGCTTGCA JERGEAGTTCTCTT JELLING TOTAL TOT	AACGAG TAGCTT
	AAG GCA
	CTTC
.97 .117 .117 .117 .117 .117 .117 .117	
	் ம்

중 음 중

₽

ঠ

뭐

Ś

밁

δ

밁

Ś

밁

밁

Ş

र्

음 중 음

밁

```
밁
               Ş
                                            뭕
                                                            δ
                                                                                       뮍
                                                                                                          δ
                                                                                                                               . 유
                                                                                                                                                          S
                                                                                                                                                                                   문
                                                                                                                                                                                                     5
                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                              멎
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                      ૃંઇ
                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                              1398
 1758
                      1752
                                              1698
                                                                     1692
                                                                                          1638
                                                                                                                 1632
                                                                                                                                       1578
                                                                                                                                                             1572
                                                                                                                                                                                    1518
                                                                                                                                                                                                           1512
                                                                                                                                                                                                                                1458
                                                                                                                                                                                                                                                       1452
                                                                                                                                                                                                                                                                                                    1392
                                                                                                                                                                                                                                                                                                                           1338
                                                                                                                                                                                                                                                                                                                                                                       1278
                                                                                                                                                                                                                                                                                                                                                                                                                     1218
                                                                                                                                                                                                                                                                                                                                                                                             1272
                                                                                                                                                                                                                                                                                                                                                                                                                                          1212
CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                                                                                                                                                                                                                                                                                         CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA 1751
                                                                                                      TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAAACTCTT
                                                                                                                                        CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                    CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                 GACAAAAATAAAGATAAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                               CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                             CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                            GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                     CTCATGATTGGGACCTATTCAAGCTAATGGGATAGGATCTGGCCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                  CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                             CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA 1757
                                                                                          TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                   GACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                              GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                 1391
                                                                                                                                                                                                                                                                              1457
                                                                                                                                                                                                                                                                                                                                                                      1337
                                                                                            1697
                                                                                                                 1691
                                                                                                                                       1637
                                                                                                                                                             1631
                                                                                                                                                                                    1577
                                                                                                                                                                                                          1571
                                                                                                                                                                                                                                1517
                                                                                                                                                                                                                                                       1511
                                                                                                                                                                                                                                                                                                    1451
                                                                                                                                                                                                                                                                                                                           1397
                                                                                                                                                                                                                                                                                                                                                                                             1331
                                                                                                                                                                                                                                                                                                                                                                                                                     1277
                                                                                                                                                                                                                                                                                                                                                                                                                                          1271
```

```
US-10-187-339-9

Sequence 9, Application US/10187339

Publication No. US20030084478A1

GENERAL INFORMATION:
APPLICANT: Ream, Walt et al.,
TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and
TITLE OF INVENTION: Methods and Compositions for Producing the Same
FILE REFERENCE: 53629

CURRENT APPLICATION NUMBER: US/10/187,339

CURRENT FILING DATE: 1998-11-04

PRIOR APPLICATION NUMBER: US/09/434,837

PRIOR APPLICATION NUMBER: US/09/434,837

PRIOR APPLICATION NUMBER: US/09/434,837

PRIOR APPLICATION NUMBER: US/09/434,837

PRIOR PILING DATE: 1998-11-05

NUMBER OF SEQ ID NOS: 12

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 9

LENGTH: 2544

TYPE: DNA
ORGANISM: Agrobacterium tumefaciens
US-10-187-339-9

Query Match
Best Local Similarity 100.04; Pred. No. 0;
Matches 1788; Conservative 0; Mismatches 0; Indels 0; Gaps

Qy

12 ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACAAAATGGTGGATCTGACAATGGT
Db

318 ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
```

71 377

0

5 밁 δ g S 밁 ર્ В δ 밁 5 밁 ঠ В δ 밁 Ş

	492 GCTGTACGAATGCGATGAATGCGTTACCGATTACCCTTGAAGGGGC 731	GATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
RESULT 4  US-10-140-472-358  US-10-140-472-358  Sequence 358, App. Publication No. UI GENERAL INFORMATI APPLICANT: Baker APPLICANT: Beree APPLICANT: Desn APPLICANT: Filv APPLICANT: Godo, APPLICANT: Sherr APPLICANT: Sherr APPLICANT: Stew, APPLICANT: Watal APPLICANT: Watal APPLICANT: Tumal APPLICANT: Tomal APPLIC	. 1878 1632 1938 1692 1998 1752 2058	Db 1458 TAGGTC Qy 1212 TTCAGG Qy 1212 TTCAGG Qy 1272 CCTCAY Qy 1272 CCTCAY Qy 1272 CCTCAY Qy 1332 TTTTGG Qy 1332 TTTTGG Qy 1392 GCGGAY Qy 1452 CGGTGT Qy 1452 CGGTGT Qy 1452 CGGTGT Qy 1512 GACAAA Db 1818 GACAAA Qy 1572 CACATG

```
ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                                                                                                                                                                                                                                                                                                     AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                             ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA
                                                                                                  ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA 1751
                                                                                                                                                                                GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTT
                                                                                                                                                                                                                                     AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                               STGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                     TGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA 1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA 1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 2105
                                                                                                                                                         SCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3AAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                              1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1271
                                                                             2057
                                                                                                                                                           1997
                                                                                                                                                                                                                                       1937
                                                                                                                                                                                                                                                                            1631
                                                                                                                                                                                                                                                                                                                   1877
                                                                                                                                                                                                                                                                                                                                                        1571
                                                                                                                                                                                                                                                                                                                                                                                               1817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1517
```

```
US-10-140-472-358
Sequence 358, Application US/10140472
Publication No. US20030138888A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maureen
APPLICANT: Desnoyers, Luc
APPLICANT: Desnoyers, Luc
APPLICANT: Gerviteen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Sherwood, Steven
APPLICANT: Sherwood, Steven
APPLICANT: Stewart, Timothy A.
APPLICANT: Stewart, Timothy A.
APPLICANT: Watanabe, Colin K
APPLICANT: Watanabe, Colin K
APPLICANT: Zhang, Zemin
APPLICANT: Zhang, Zemin
APPLICANT: APPLICANTON: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330RIC168
CURRENT APPLICATION NUMBER: US/10/140,472
CURRENT APPLICATION STEWS ENCODING THE SAME
FILE REFERENCE: DATE: 2002-05-66
Prior Apploication removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
```

AND NUCLEIC

```
RESULT 5
US-10-141-761-358
                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-140-472-358
                                                                                                                                                                          Sequence 358, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
              APPLICANT:
                                                                                                                                                         APPLICANT: Baker, Kevin P.
APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q ID NO 358
LENGTH: 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                        1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tch 2.3%; Score 40.8; DB 12; Length al Similarity 5.4%; Pred. No. 0.016; 38; Conservative 197; Mismatches 473; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1049
                                                                                                                                                                                                                                                                                                                                                          AGGGAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLLHHNRFLCTCDAVWFVWWVNHTEVTI PYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAATGTTCCGATAGTGGACGGATCGCCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
          Gao, Wei-Qiang
Gerritsen, Mary E.
Goddard, Audrey
                                                                                                                 DeForge,Laura
                                                                                                                                    Beresini, Maureen
                                                                       Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                               Application US/10141761 o. US20030148432A1
                                                                                                                                                                                                                                                                                                                                                          1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                Ş
                                                                                          밁
                                                                                                                                Ş
                                                                                                                                                                          밁
                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo Sapien US-10-141-761-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed - See Palm or File Wrapper NUMBER OF SEQ ID NOS: 550 SEQ ID NO 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C198
FILE REFERENCE: P3330R1C198
CURRENT APPLICATION NUMBER: US/10/141,761
CURRENT FILING DATE: 2002-05-08
CURRENT FILING DATE: 2002-05-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 1049
                                                                                                                                                                                                                 1078
                                                                                                                                                                                                                                                                                             1018
                                                                                                                                                                                                                                                                                                                                                                             958
                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                           898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                  AGGGAGTCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                  AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                           GGGCAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCTTGAAG
                                                                                                                                                                                                                                                                                                                                     LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                           AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
              TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                       TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                               GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                     LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                   SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFOSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGTCATTGGCGCTTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                          DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin L.
Sherwood, Steven
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart, Timothy A. Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.3%; Score 40.8; DB 12; ilarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

717

957 657 837

777

477 717 417 357

537

897

```
RESULT 6
US-10-142-885-358
                                        밁
                                                                         S
                                                                                                                        유
                                                                                                                                                     Ş
                                                                                                                                                                                                    В
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT; ORGANISM: Homo Sapien
US-10-142-885-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prior Apploication rev
NUMBER OF SEQ ID NOS:
SEQ ID NO 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 358, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maure
APPLICANT: DeForge, Laura
APPLICANT: Desnoyers, Luc
APPLICANT: Filvaroff, Elle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/142,885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
1018 GGGCAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAG 107.7
                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 2.3%; Score 40.8; DB 12; Similarity 5.4%; Pred. No. 0.016; 38; Conservative 197; Mismatches 473;
                                        LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                        LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI 657
                                                                                                                                                                                                                                                                                                                                                                    KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                        SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                              GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                        FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                          GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                          GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/10142885
b. US20030157604A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               removed - See File Wrapper or
OS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                od, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                          717
                                                                                                                                                                957
                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                                837
                                                                                                                                                                                                                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
```

```
; SEQ ID NO 358
; LENGTH: 1049
; TYPE: PRT
; ORGANISM: Homo S
US-10-158-790-358
S
                                         밁
                                                                              Ś
                                                                                                                         밁
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-158-790-358
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 358, F
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID.NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/158,790
CURRENT FILING DATE: 2002-05-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: P3330R1C448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                778 LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL 837
                                                                                                                            418
                                                                                                                                                                                                                                                                                               298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               838 THLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                              358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                                                                                                                                                      538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTG 1137
                                           KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                  GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                            KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                   CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG 717
                                                                                                                                                                                                                                                      GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sherwood, Steven
Smith, Victoria
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10158790
                                                                                                                                                                                                                                                                                                                                                                             2.3%; Score 40.8; DB llarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US20030180879A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                         DB 12;
                                                                                                                                                                                                                                                                                                                                                                                  473;
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  897
                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                  0
```

897

1017

837

837

537 777 717

```
밁
                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-10-137-871-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                    Prior Application removed -
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENCTH: 1049
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 358, Application No. US21 GENERAL INFORMATION
                                                                                                                        Query Match
                                                                                                                                                               ORGANISM: Homo Sapien -10-137-871-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/137,871
CURRENT FILING DATE: 2002-05-03
                                                                                                                                                                                                                                                                                                                                  APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                 Local Similarity
les 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                        538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658 SKNSLSFLPSGVFDGMPPNLKNLSLÅKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 898 GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDKYAKTENFKIAFYLSHORLMDEKVDVIILIFLEKPFOKSKFLOLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumas, Daniei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                    Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Beresini,Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10137871
b. US20030207350A1
                                                                             2.3%; Score 40.8; DB 12; ilarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                               See Palm or File Wrapper
                                                                                 Indels
                                                                                                                    Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1245
                                                                               0
                                                                               Gaps
      357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 717
                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
US-10-140-805-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 358, Application US/10140805
Publication No. US20030207417A1
                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: 9330R1C176
CURRENT APPLICATION NUMBER: US/10/140,805
CURRENT FILING DATE: 2002-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                      Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                Watanabe, Colin K
Wood, William
                                                                                                                                                         Tumas, Daniel
                                                                                                                                                                                                                                                                                               Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                    Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                             Stewart, Timothy A
                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                  Sherwood, Steven
                                                                                                                                                                                                                                        Gurney, Austin L.
                                                                                                                                                                                                                                                         Godowski, Paul J.
                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                             DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                             Beresini, Maureen
```

AND NUCLEIC

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: PRT
; ORGANISM: Homo
US-10-140-805-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ó
                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                RESULT 10
US-10-140-864-358
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                 ક
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prior Apploication removed -
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                       Sequence 358, Application US/10140864 Publication No. US20030207419A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                       1078
                                                                                                                                                                                                                                                                                          1198
                                                                                                                                                                                                                                                                                                                                                              1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FOPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF 477
                                                                                                                                                                                                                                                     TDKYAKTENFKIAFYLSHORLMDEKVDVIILIFLEKPFOKSKFLOLRK 1005
                                                                                                                                                                                                                                                                                       AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                  TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                          Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                            DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
Gerritsen, Mary E.
                Filvaroff, Ellen Gao, Wei-Qiang
                                                    Deforge, Laura
Desnoyers, Luc
                                                                                         Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.3%; Score 40.8; DB 12; ilarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1049;
                                                                                                                                                                                                                                                                                          1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  597
                                                                                                                                                                                                                                                                                                                                  957
                                                                                                                                                                                                                                                                                                                                                                                                         897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo US-10-140-864-358
                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                               밁
                                                                                                                                                           Ş
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                    S
                                                          밁
                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prior Application removed - See Palm or File
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC FITES OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C184
CURRENT APPLICATION NUMBER: US/10/140,864
CURRENT FILING DATE: 2002-05-07
                        1198
                                                                                                                                                                                                                                          1018
                                                                                                                                                                   1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                        598 LOKLMANDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                              838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                    GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC 657
                                                                                                                                                                                                                                        GGGCAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCTTGAAG 1077
                                                                                                                                                                                                                                                                            LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                             AATÇCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                   SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                        AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                      LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                           DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                               AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                   TNLILESLSISVSLELMVMMTASHLYEWDVWYIYHECKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                    GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe, Colin K Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumas,Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.3%; Score 40.8; DB 5.4%; Pred. No. 0.016;
         Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1049;
```

837 537 777 477

657

777

957

717 957 0

Gaps

0

417

TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005

```
Query Match
Best Local Similarity
Matches 38; Conserva
                                                                                                                                                                            á
                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                           ર્
                                                                        B
                                                                                                          ঠ
                                                                                                                                                     밁
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     श
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-140-923-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-140-923-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prior Application removed - See Palm or File Wrapper NUMBER OF SEQ ID NOS: 550 SEQ ID NO 358 LENGTH: 1049 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 358, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: P3330R1C188
CURRENT APPLICATION NUMBER: US/10/140,923
CURRENT FILING DATE: 2002-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                   958 AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                                                  658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                        SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                            GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                 LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                      GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                 GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                    KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                         GCGGTCATTGGCGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                             KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                         FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wood, william
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stewart, Timothy A. Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DeForge,Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10140923 o. US20030207355A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.3%; Score 40.8; DB ilarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                        717
                                                                                                               957
                                                                                                                                                   657
                                                                                                                                                                                      897
                                                                                                                                                                                                                           597
                                                                                                                                                                                                                                                                 837
                                                                                                                                                                                                                                                                                                    537
                                                                                                                                                                                                                                                                                                                                           777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
В
                                       á
                                                                                   밁
                                                                                                                        Ś
                                                                                                                                                                   밁
                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo Sapien US-10-141-756-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-141-756-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior Apploication removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 358, Application US/10141756 Publication No. US20030207359A1
                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/141,756
CURRENT FILING DATE: 2002-05-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: P3330R1C200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                      358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                           598 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                    298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR 357
                                                                                                                                                                                                                                                                                              538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                         GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGAGTCCTTCTCCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNLILESLSISVSLELMVMMTASHLYEWDVWYIYHECKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGGTTTTCATGAGCGAGAFATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                   KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sherwood, Steven Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                           2.3%; Score 40.8; DB 5.4%; Pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                              DB 12;
                                                                                                                                                                                                                                                                                                                                     473;
                                                                                                                                                                                                                                                                                                                                                                              Length 1049
                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                       <u>..</u>
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                             657
                                                                                   477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                897
                                                                                                                                                                                                                                                                                                                                       0
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-141-759-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                            US-10-141-759-358
                                                                                                                                  Prior Apploication removed - See File Wrapper
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 358, A Publication No.
                              Matches
                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/141,759
CURRENT FILING DATE: 2002-05-08
                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C197
                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                       TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             958 AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          898 GCATTCTGCTTGTTTTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                778 GTAGACGATGTTACAATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                              38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 113:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY 897
                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen, Mary E. Goddard, Audrey Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                           Zhang, Zemin
                                                                                                                                                                                                                                                                                                        Watanabe, Colin K
                                                                                                                                                                                                                                                                                           Wood, William
                                                                                                                                                                                                                                                                                                                           Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                        Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                         Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10141759
o. US20030207361A1
                            2.3%; Score 40.8; DB 12; ilarity 5.4%; Pred. No. 0.016; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                      ood, Steven
                                                                                                                                                                                    ç
                                                                                                                                                                                       Palm
                              Indels
                                                         Length
                                                            1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1245
                                                                                                                                                                                                                                                                AND NUCLEIC
                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        897
                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                        US-10-123-155-358
                                                            APPLICANT:
                                                                                          APPLICANT:
                                                                                                                                                                                                                                  APPLICANT:
 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C30
                                               APPLICANT:
                                                                                                                         APPLICANT
                                                                                                                                       APPLICANT
                                                                                                                                                       APPLICANT
                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    778
```

```
Sequence 358, Application US/10123155 Publication No. US20030068794A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1198 AGGGAGTCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  778 LILHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    838 GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                718 GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNLILESLSISVSLELMVMMTASHLYFWDVWYIYHECKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
Watanabe, Colin K
Wood, William
                                                                 Tumas, Daniel
                                                                                          Stewart, Timothy A
                                                                                                                         Smith, Victoria
                                                                                                                                                     Sherwood, Steven
                                                                                                                                                                                       Gurney, Austin L.
                                                                                                                                                                                                                Godowski, Paul J.
                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                           Gao, Wei-Qiang
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                         Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                    DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                    Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        357
```

Zemin

```
Sequence 358, Application US/10146731
Publication No. US20030129692A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maureen
APPLICANT: DeForge, Laura
APPLICANT: Desnoyers, Luc
APPLICANT: Filvaroff, Ellen
                                                                                                                                                            RESULT 15
US-10-146-731-358
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-123-155-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/123,155
CURRENT FILING DATE: 2002-04-15
Prior Application removed - See Palm or F:
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 38; Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         / Match 2.3%; Scor
Local Similarity 5.4%; Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                             1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1018
                                                                                                                                                                                                                                                                                1198 AGGGAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                778 LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                    TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                     DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                          AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGGTCATTGGCGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                   TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         See Palm or File Wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 40.8; DB Pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     473; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                   897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                477
                                                                                                                                                                                                                                                                                                                       957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                         S
                                                                                                밁
                                                                                                                                 5
                                                                                                                                                                         g
                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-146-731-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C323
CURRENT APPLICATION NUMBER: US/10/146,731
CURRENT FILING DATE: 2002-05-15
CURRENT FILING DATE: 2002-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                        1078
                                                                                                                                                                                                                  1018
                                                                                                                                                                                                                                                                                                958
                                                                                                                                                                                                                                                                                                                                       658
                                                                                                                                                                                                                                                                                                                                                                                                                      598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                         AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                         LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                  LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                  DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                         LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM 777
                                                                                                                                                                                                                                                                                                AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                      GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                  SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
                                                                                                                                                                                                                                                                                                                                                                           GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Austin L.
Sherwood, Steven
Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerritsen, Mary E. Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.3%; Score 40.8; DB 5.4%; Pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    657
                                                                                                                                                                           837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      357
                                                                                                                                                                                                                  1077
                                                                                                                                                                                                                                                                                                1017
                                                                                                897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        777
                                                                                                                                                                                                                                                                                                                                                                                                                                                           897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
```

á

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                     იი
                                                                                                                                                                                                                                             ŏ
     4000
                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
2230.6
2230.6
2225.8
22162.8
2040.8
2040.8
1788.6
                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N Geneseq 19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
8: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA199.DAT:*
11: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA199.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
17: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            November 23, 2003, 19:28:25; Search time 599.746 Seconds (without alignments)
10208.191 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-434-837-10
2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    atgtcagcttcacctctcct.....actaccgcagtagaaattag 2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*
                                                                                                                                                                                                                                       Length
                                                                            2268
24596
24593
24593
6112
                         7208
2544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                             В
                      AAD00617
AAN50182
AAN50226
AAV69756
AAT48868
AAT48870
AAD00626
                                                                                                                                                                                                                                             IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5105512
                   Agrobacterium tume
Complete nucleotid
Sequence of opine
Tryptophan oxygena
IamS expression ve
IamH expression ve
                                                                                                                                                                                                                                          Description
```

Colon adenocarcino	4 ABL6199	22	37	1.6	<u>ب</u>	.4 5	
r acties triloteace	Z MAR 2 9 0 9	òù	ıυ	٠		4.	
1101010	0 237440	пц	n F	1.	00.0	 	
	ממסכם ליי	1			י ח	3	
P acnes linoleate	N	69		٠		42	
B subtilis PanE2	4	67	ω	٠		41	Ω
Pantothenate relat	4	67	ω		5	40	Ω
Human nervous sy	N		ы	•	36	39	
Human polyamine ox	5		_		36	38	
Human tyrosine kin	0 AAX8414	42	1	1.6	36	37	
osine	0	42	_	٠	36	36	
Tyrosine kinase as	9 AAV1609	42	16		36	35	
Gene #3441 used t	4 ABN9694		_		36	34	
Human prostate tum	AAZ5296		<u> </u>	٠	36	33	
Human polyamine o	AAL5138		_		36	32	
Human polyamine o	AAL5138		,		36	31	
Human ovarian an	ABQ5414			٠	36	30	
polyamine	AAL5138				36	29	
Human secreted pro	25 ABZ71371		ω		٥.	28	
	25 ACC50683	3758 :	ω	1.6	36.2	27	
77	21 AAA61291		ω		φ,	26	
Murine secreted pr	22 AAS04268			٠	ა	25	
Micrococcus luteus	20 AAZ30546		_		ა	24	
Mycobacterium tube	AAI9968	Ψ	441		37	23	
Mycobacterium t	22 AAI99683	v	440		37	22	
Propionibacterium	23 AAS59623		18		7.	21	
	18 AAV74517		29	1.6	7.	20	
Staphylococcus aur	23 AAS54530		7	1.6	37.4	19	O
n	25 ABT14973		7		7	18	a
DNA encoding nove	23 AAS89906		ω		7.	17	
DNA encoding nove	23 AAS89006		ω	1.6	.7	16	
~	21 AAC05199			1.7	7	15	
llus	25 ABZ56743			1.7	œ	14	
Nucleic acid encod	AAX1512		_	1.7	38.6	13	
a me	23 ABL13667		_	1.7	9	12	
la me	ABL1566	00	4	1.8	9	11	
Drosophila melano:	23 ABL13666	34	47	1.8	39.8	10	
TL-DNA region of A	7 AAN60970	26	21	6.0	136.4	9	

## ALIGNMENTS

Agrobacterium tumefaciens T-DNA gene, iaaM

29-AUG-2000 (first entry)

AAD00617 standard; DNA; 2268 BP.

RESULT 1
AADO0617
ID AADO
XX AADO
XX AADO
XX AADO
XX AGY
AC 29-A
XX iaaM
XW iaaM
XW bact
XW bact
XW WO20
XX WO21
XX WO1-N
XX WPI
XX WPI
XX WPI
XX WPI
XX WPI
XX WPI
XX Gall iaaM; iaaH; ipt; T-DN $\lambda$ ; transferred DN $\lambda$ ; gall-disease resistance; bacterial resistance construct; untranslatable RN $\lambda$ ; tumour; oncoge auxin; plant growth hormone; ds. Gall resistant plants generated by transforming cells with an WPI; 2000-365599/31. Ream W, 05-NOV-1998; 04-NOV-1999; WO200026346-A1 11-MAY-2000 Agrobacterium tumefaciens. (UYOR-) UNIV OREGON STATE. Mok MC, 98US-0107185 99WO-US26100 Lee H;

Agrobacterium tume

```
Query Match
Best Local S
Matches 2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium infection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaM, iaaH and ipt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium rumefaciens T-DNA (transferred DNA) gene iaaM, required for auxin production. It encodes an enzyme that converts tryptophan into indole acetamide, essential for auxin synthesis. The overproduction of these plant growth hormones results in gall formation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        untranslatable nucleic acid homologous to a gall disease-causing gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cal Similarity
2268; Conserv
                                                                                                                                                                                                                                                                                                                                                                                           361
                   661
                                                   661
                                                                                                                    601
                                                                                                                                                      541
                                                                                                                                                                                      541
                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           щ
                                     TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                        TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                          CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                             CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                           GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                           CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                              GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGAAGCTTCTAGGGGAAGGAGTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 2268; ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              543 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G; 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                   720
                                                                                     660
                                                                                                                      660
                                                                                                                                                        600
                                                                                                                                                                                          600
                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                               밁
                                                                 Ş
                                                                                                     밁
                                                                                                                                                               밁
                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
Ş
                                                                                                                             δ
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                        1621
                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                                                                                                                             1501
                                                                                                                                                                                                                                                                                                                                             1501
                                                                                                                                                                                                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                        1681
                                                                                                                                                                                                          1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                     GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                                                                                                                                                                                                                                                                                                    CAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                  GAAGTGGTTAACGGTGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGAAAATCAGCGGATGTGCCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGTCCTTCTCTCAGGGATAGAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TICTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
 AATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTG
                                   GTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCG
                                                                                                      TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                          TCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGT
                                                                                                                                                                                             ACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCG
                                                                                                                                                                                                                                                                  AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                                                                                                                                                GAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                          ACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCG
                                                                                                                                                                                                                                           AAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGAT
                                                                                                                                                                                                                                                                                                               CAGAAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGGCTTAAGAGCGGGATATCTGAACTTTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                     1800
                                                                                                                                                                                                          1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
     1860
                                     1800
                                                                                                        1740
                                                                                                                                          1740
                                                                                                                                                                                                                                             1620
                                                                                                                                                                                                                                                                             1620
                                                                                                                                                                                                                                                                                                               1560
                                                                                                                                                                                                                                                                                                                                              1560
                                                                                                                                                                                                                                                                                                                                                                                                                1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1020
                                                                                                                                                                           1680
                                                                                                                                                                                                                                                                                                                                                                                1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
```

ş

밁 Ş 뮍

밁

Ş 밁 δ 멍 5

중 유

밁

ð 밁 Ş 멍 S В ঠ В S

```
RESULT 2
AANSO182
ID SANS
XX AANS
XX AANS
XX AANS
XX COMP
DT 17-C
XX COMP
DE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
 The inventors claim a vector contg. a transformation-inducing principle (TIP) gene from Ti plasmid pTi15955. The sequence of the T-DNA of the octopine-type Ti plasmid has fourteen open reading
                                                                                                 New DNA vectors contg. T-DNA sequence of for expression in plant cells to confer oplants and their cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plant vector; transformation-inducing octopine Ti plasmid; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Complete nucleotide sequence plasmid pTi15955.
                                                                                                                                                                                                                                                                                                                                                                                          EP145338-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
17-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAN50182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAN50182 standard;
                                                                                                                                                                     WPI; 1985-148223/25.
                                                                                                                                                                                                                                                                                        18-NOV-1983;
                                                                                                                                                                                                                                                                                                                        16-NOV-1984;
                                                                                                                                                                                                                                                                                                                                                          19-JUN-1985
                                                                                                                                                                                                                                                                                                                                                                                                                       Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1861
                                                                                                                                                                                                                                      AGRIGENETICS RES ASSOC LUBRIZOL GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAAACCGGCGTGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGGTCCCCGACAAAAAAGGCGATTATGTCTGCTGCGGGACGCAATTTTCGAGATCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAA
                                                                   Fig 1; 87pp;
                                                                                                                                                                                                      Kemp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                           tumefaciens
                                                                                                                                                                                                                                                                                        83US-0553786
                                                                                                                                                                                                                                                                                                                         84EP-0307969
                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24596
                                                                                                                                                                                                                                                                                                                                                                                                                           ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                         LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                           15955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T-DNA region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          principle
                                                                                                                    f octopine
desirable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TIP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                   Ti plasmid properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2268
                                                                                                                    to '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Į.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2040
                   밁
                                           5
                                                                                 유
                                                                                                                                       망
                                                                                                                                                                            δ
                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         នន្ទន្ទន្ទន្ទន្ទ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 2258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      frames bounded by eukaryotic promoters, ribosome binding sites, and polyadenylation sites. With the vectors, expression of structural foreign genes in plant cells is promoted. The gene esp. encodes an insecticidal toxin identical to or derived from the crystal protein of Bacillus thuringiensis.

(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Simhes 2258;
                    6649
                                                                                                                                                     6529
                                                                                                                                                                                                                      6469
                                                                                                                                                                                                                                                                                      6409
                                                                                                                                                                                                                                                                                                                                                         6349
                                                                                                                                                                                                                                                                                                                                                                                                                         6289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5869
                                                                                                                    781
                                                                                                                                                                                     721
                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24596 BP;
                                                                                                                                                                                                                                                                                                                                                       CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                         CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                    TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                      GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                     GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                         GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                    TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                           TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6534 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5510 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 2230.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5793 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Η.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

6168

360

6228

6048

240

6108

300

5988

5928

120

180

5868

2; 60

6468

660

720

6528

780

6648 900 6708 6588

840

6408

600

6348

540

6288

ঠ

밁

```
1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                           1860
                                                                                                                                                                                                            1800
                                                                                                                                                                                                                                                                                            1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                     7608
                                                                                                                                                                                                                                                     7548
                                                                                                              GCCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAGAAATCAGCGGATGTGCCCTGAAGGAATTCTCAGAACTTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGCTTGTTTTTCCTTCCAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                          CCCGGCGTTTGCCCACCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                            TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                        TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                  GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                   TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                         1979
                                                                                                                                                                                                              1859
                                                                                                                                                                                                                                                                                              1799
                                                                                                                                                                                                                                                                                                                                                                               1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6768
7787
                                                                                      7727
                                                                                                                           1919
                                                                                                                                                                                                                                                                                                                                                                                                                        7487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6828
                                                                                                                                                                     7667
                                                                                                                                                                                                                                                     7607
                                                                                                                                                                                                                                                                                                                                       7547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960
```

δ

음 성 음

음 성

음성 음성 음성

ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA

음 성

5809

5868

60

음 성

8 8 8 8 8 8

밁

음 성

음 성

유

8 5 8 5 8 5

```
RESULT 3
ANN 5025 M
TO ANN 5025 M
XX AANS 25-M
DT 25-M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
Query Match
Best Local Similarity
Matches 2255; Conserv
                                                                                                                                                  plant cells (and protoplasts) and plasmids contg. the DNA fragment which includes an opine synthase gene plus a gene for antibiotic resistance are claimed. These plasmids provide max. efficiency for transfer of foreign genes and can be amplified in the plant genome. They do not contain genes specifying tumour formation and will not spread antibiotic resistance troughout the plant population. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                     Sequence 24593
                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 212-217; 69pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1985-112088/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-SEP-1983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-SEP-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-MAY-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP140556-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plant vector; Ti plasmid; T-DNA; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAR-2003
16-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAN50226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAN50226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (AGRK ) AGRIGENETICS RES ASSOC (LUBR ) LUBRIZOL GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7788
                                                                                                                                                                                                                                                                                                                                                                                                                                          mid contg. opine synthase gene for selection useful as vector for transforming plant cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTACTTGGCGGGTTGCAGTTGTTCCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCACTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sutton DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              opine synthase
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumefaciens Ti plasmid
                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83US-0532280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84EP-0306233
                                                                                                     6554 A; 5493 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                       98.1%;
99.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barker RF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
  Score 2225.8;
Pred. No. 0;
0; Mismatches
     <u>.</u>
                                                                                                          5787
                                                                                                       G; 6759 T;
                                                     DB
     12;
                                                     9
       Indels
                                                     Length
                                                                                                       0 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                          24593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8076
     2:
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8027
     2
```

121 CGAGAANGCTCCAGCAACACAGCACTTCCCACACCACCACTTCCACACCACTTCCACCACTTCCACCA	61 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
GAGTECTTTCTTCAGGGATTAGAGGATCTTTCAGGGATTTCAGGGATTTCAGGGATTTCAGGGATTTCAGGGATTTTCAGGGATTTTCAGGGATTTTCAGGGATTTTCAGGGATTTTCAGGGATTTTCAGGGATTTTCAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTAGGATTTCAGGATTTCAGGATTTCAGGATTTCAGGATTAGGATTAGGATTAGGATTTCAGGATTTCAGGATTAGGATTTCAGGATTAGGATTAGGATTAGGATTAGGATTAGGATTAGGATTAGGATTAGGATTAGGATTCCAGGATTATAGGAT	1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1

8 8 8 8

```
밁
              S
                                        문
                                                              á
                                                                                          밁
                                                                                                               5
                                                                                                                                            Query Match
Best Local Similarity
Matches 2192; Conserv
                                                                                                                                                                                                                                This is the nucleotide sequence of the Agrobacterium tumefaciens laam gene that codes for tryptophan oxygenase (see AAW81574). This enzyme catelyses the conversion of tryptophan to indoleaceteamide in the biosynthetic pathway of the auxin indoleacetic acid. A claimed DNA construct comprises either an isopentenyl transferase (see AAW81575) or a tryptophan oxygenase encoding sequence, operably linked to an ovary or developing fruit-specific plant-expressible promoter (see AAV89755 and AAV69759). The construct is used to stably integrate enzymes involved in cytokinin or auxin biosynthesis into the plant genome to achieve a transgenic plant (preferably tomato, cucumber or watermelon) producing seedless fruit in the absence of
                                                                                                                                                                                                                                                                                                                                                                                                                      A new construct to express useful for, e.g. producing transgenic plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Li Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-034673/03
P-PSDB; AAW81574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV69756 standard; DNA;
                                                                                                                                                                                                Sequence 2211
                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 21-26; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9849888-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Agrobacterium tumefaciens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tryptophan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tryptophan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV69756
                                                                                                                                                                                                                         pollination.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UNIV ) UNIV KANSAS STATE RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-NOV-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8028
                184
                                                                  124
                                         62
                                                                                                                     64
                                                                                            μ
TGCAAAAGGCTGGCCGATGGTCGCCTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                           GAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                                            ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                    ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oxygenase; iaaM gene; auxin; indoleacetic acid;
plant; seedless fruit; tomato; watermelon; cucumber;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oxygenase
                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                BP; 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0045725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US09013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2205
                                                                                                                                                        95.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          iaaM
                                                                                                                                                                                                A; 504 C; 595 G; 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                  phytohormones in developing substantially seedless fruit
                                                                                                                                              0; Mismatches
                                                                                                                                                        Score 2162.8;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                T; 0 other;
                                                                                                                                                                      DB 20;
                                                                                                                                               12;
                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     fruit
                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                 fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8076
                                                                                                                                                                         2211;
                                                                                                                                            2
                                                                                                                                            Gaps
                                                                                                                     123
                                                                  183
                                                                                            60
              243
                                        120
                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                     S
                                                    밁
                                                                           Ś
                                                                                                        밁
                                                                                                                             δ
                                                                                                                                                          문
                                                                                                                                                                                S
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
    밁
    1201
                           1263
                                                                                                                                                                                                                                      1024
                                                                               1204
                                                                                                         1081
                                                                                                                                                           1021
                                                                                                                                                                                     1084
                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                         964
                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                               844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304
                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                              GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                  TGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAATGCCGCTGTACGAGAATGGCATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTCCGAAGCACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCTCCGCTTATATCTATATTTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                  TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTT
                                                      TCCTTCTCTTCAGGGATAGAGAGGGATCTTTCTGGGCACACATCCTCCTGGTGAAACA
                                                                     TCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AAACA
                                                                                                                                                                          TTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTTGAAATCA
                                                                                                                                                                                                                                                                 GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                    TGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                     AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                        GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTCCGAAGCACCAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCAGTT
                                                                                                          CTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCCTTGAAGGACGGT
                                                                                                                                                                                                                                                                                                                                                                      AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCTGCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                                                                                                               1020
                             1322
                                                       1200
                                                                                 1262
                                                                                                          1140
                                                                                                                                                              1080
                                                                                                                                                                                      1143
                                                                                                                                                                                                                                        1083
                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                            1023
      1259
                                                                                                                                    1203
                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                              963
                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
```

```
RESULT 5
AAT48868/c
ID AAT48868 standard; L
XX
AC AAT48868;
XX
DT 07-APR-1997 (first
                                                                                                                                                                      유 상 유
                                                                                                                                       S
                                                                                                                                                                                                                                                ક
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                              Б
                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1680
                                                                                                                      2160
                                                                                                                                                                                                                                                        2103
                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                            2043
                                                                                                                                                                                                                                                                                                                                                               1983
                                                                                                                                                                                                                                                                                                                                                                                           1860
                                                                                                                                                                                                                                                                                                                                                                                                                                               1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                    1923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1320
                                                                                                                     TCTCGAACACTCTTGGAAGAGATATAACTACCGCACTAGAAATTAG 2205
                                                                                                                                    TCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG 2268
                                                                                                                                                                        GTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAATCC
                                                                                                                                                                                        GTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAATCC
                                                                                                                                                                                                                                             CTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGACCGC
                                                                                                                                                                                                                                                                                 TTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGTTTA
                                                                                                                                                                                                                                                                                                  TTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGTTTA
                                                                                                                                                                                                                                                                                                                                  TGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGAGGA
                                                                                                                                                                                                                                                                                                                                                       TGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAAACCGGCGTGGTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                        GGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGAAAAGACAAAAATAAAGATAAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGGTTAACGGTGTGTCTGTGAGCCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGA
                                                                                                                                                                                                                            CTTGGCGGGTTGCAGTTCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGCCGCAGGATCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
 (first
                                                     DNA;
 entry)
                                                     6112
                                                                                                                                                                        2159
                                                                                                                                                                                                                                                     2162
                                                                                                                                                                                                                                                                                 2039
                                                                                                                                                                                                                                                                                                          2102
                                                                                                                                                                                                                                                                                                                                      1979
                                                                                                                                                                                                                                                                                                                                                               2042
                                                                                                                                                                                                                                                                                                                                                                                          1919
                                                                                                                                                                                                                                                                                                                                                                                                                   1982
                                                                                                                                                                                                                                                                                                                                                                                                                                               1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1382
                                                                                                                                                                                                  2222
                                                                                                                                                                                                                            2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1622
```

```
δ
                                                   В
                                                                           Ś
                                                                                                       뮍
                                                                                                                             Ş
                                                                                                                                                             밁
                                                                                                                                                                                    δ
                                                                                                                                                                                                                В
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 2139; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          canola; rape; antisense RNA; stress resistance; herbicide resistance; transgenic plant; crop prot IamS; indole acetamide synthase; Bp10; promoter; pPHP5838; ds; cyclic.
                                                                                                                                                                                                                                                                                                                                                     Plasmid pPHP5838 (AAT48868) contains the Brassica microspore-specific Bp10 promoter linked to the indole acetamine synthase (IamS) gene from the Agrobacterium tumefaciens Ti plasmid derivative pPCV311, and to the nos 3 non-translated region. The IamS gene is involved in tumour formation in Agrobacterium-infected plant. Plasmids pPHP5838-41 (see also AAT48869-71), contg. IamS or IamH genes under control of anther-specific Bp10 or TA39 promoters, were introduced into canola lines by transformation. Male sterile plants were obtd. These can be used in the prodn. of hybrid seed using pollen from a male fertile line.
                                                                                                                                                                                                                                                                                                                            Sequence 6112 BP; 1515 A; 1466 C; 1451 G; 1679 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant
to produce :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 39a; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PION-) PIONEER HI-BRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9640950-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chimeric Brassica sp.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-DEC-1996
                                                    2690
                                                                                                         2750
                                                                                                                                                               2810
                                                                                                                                                                                                                     2870
                         241
                                                                              181
                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1997-052340/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               expression vector pPHP5838
                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ŋ,
                                                                                                                                                                                                                                              _
                                                                                                                                                                                                                                  GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                     GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                       CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                                                                                                                           CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTAGAA
                                                                                                                                                                                                                  ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT 2811
GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                         CGTGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                               CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   molecule for preparation of male sterile plants stress resistant plants and for increase in seed
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arnison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95US-0476864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96WO-US08692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/note= "base 3794 is given
specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 3794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27a-e; 224pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PG,
                                                                                                                                                                                                                                                                                     90.0%; Score 2040.8; 94.3%; Pred. No. 0;
                                                    TGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fabijanski
                                                                                                                                                                                                                                                                        <u>.</u>.
                                                                                                                                                                                                                                                                        Mismatches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laurian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    microspore;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     as
                                                                                                                                                                                                                                                                                                 DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <
                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brassica;
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                   6112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     yield
                                                                                                                                                                                                                                                                      ۲.
د
                                                                                                                                                                                                                                                                      Gaps
```

2571 300 2631 2751

120

60

2691

δ

음 성

문

			•														
1320 1551	1260 1610	1201 1670	1141 1730	1081 1790	1021 1850	961 1910	901 1970	841 2030	781 2090	721 2150	661 2210	601 2270	541 2330	481 2390	421 2450	361 2510	301 2570
GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA 1379	ACATGGAGITTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319	GAGTCCTTCTCTAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 1259	TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1200	GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA 1140	CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGT	CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020	TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960	TTCAGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 900	GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780	TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCGAAAGTGGCG 720	TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540	CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420	CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360

밁 δ 밁 δ 유

밁 Ş 밁 5 밁

유 성

```
성 유
                                                           유 성
                                                                                                      유 성
                                                                                                                             유
                                                                                                                                                 유
                                                                                                                                                                   Вb
                                                                                                                                                                              S
                                                                                                                                                                                           뫄
                                                                                                                                                                                                   δ
                                                                                                                                                                                                             В
                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                            β δ
      Ş
                 문
                                                 Ş
                                                                               유 원
                                                                                                                                                                                                                                                                                                 유 상
                                                   2100
                                                                                                                  1920
                                                                                                                              1011
                                                                                                                                       1860
                                                                                                                                                  1071
                                                                                                                                                                      1131
                                                                                                                                                                                            1191
                                                                                                                                                                                                      1680
                                                                                                                                                                                                                1251
                                                                                                                                                                                                                           1620
                                                                                                                                                                                                                                      1311
                                                                                                                                                                                                                                                          1371
                               2160
                                                                                              1980
                                                                                                                                                                                                                                                1560
          2220
                                                                         2040
                    711
                                                               831
                                                                                   891
                                          771
                                                                                                        951
                                                                                                                                                                                                                                                                               TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA 2267
                    CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                             TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                            GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                     TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                     TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                          TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                        TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCCCAGGACCC
                                                                                                                                                                                                                 TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                                                                 1192
                                                                                                                                                                                                                                                                                         1499
                                2219
                                                     2159
                                                                                              2039
                                                                                                                   1979
                                                                                                                                        1919
                                                                                                                                                             1859
                                                                                                                                                                                  1799
                                                                                                                                                                                            1132
                                                                                                                                                                                                      1739
                                                                                                                                                                                                                            1679
                                                                                                                                                                                                                                      1252
                                                                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                           1312
                                                                                                                                                                                                                                                                     1559
                                                                                                                                                                                                                                                                                1372
                                                                                                                                                                                                                                                                                                    1432
                                           712
                                                                772
                                                                         2099
                                                                                    832
                                                                                                         892
                                                                                                                              952
                                                                                                                                                   1012
                                                                                                                                                                        1072
```

RESULT 6
AAT48870/c
ID AAT48870 s
XX
XX
AC AAT48870;
XX
DT 07-APR-199
XX
DE IamH expre
XX
W Male steri
KW Male steri 07-APR-1997 IamH expression vector pPHP5840 standard; DNA; 7208 BP

Male sterile plant; hybrid seed; pollen; microspore; oilseed; canola; rape; antisense RNA; stress resistance;

5

유성

₽ S 유성 밁 δ 밁 5 멍 5 밁 δ 문 5

```
Ś
                                                                                                                                                                               5
 맑
                δ
                                            밁
                                                                       5
                                                                                               밁
                                                                                                                                                          밁
                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                    ર્ક
                                                                                                                                                                                                                                                                    무
                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                               Best Local Sim:
Matches 2139;
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                    Plasmid pPHP5840 (AAT48870) contains the tobacco anther-specific TA39(8B3) promoter and the 0' nontrannelated leader operably linked to the indole acetamine hydrolase (IamH) gene from the Agrobacterium tumefaciens Ti plasmid derivative pPCV311, and to the PI-II 3' nontranslated region. The IamH gene is involved in tumour formation in Agrobacterium-infected plants. Plasmids pPHP5838-41 (see also AAT48868-71), contg. IamS or IamH genes under control of anther-specific Bp10 or TA39 promoters, were introduced into canola lines by transformation. Male sterile plants were obtd. These can be used in the prodn. of hybrid seed using pollen from a male fertile line.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric
Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Recombinant molecule for preparation of male sterile plants to produce stress resistant plants and for increase in seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       herbicide resistance; transgenic plant; crop protection; IamH; indole acetamide hydrolase; TA39; promoter; tobacco; pPHP5840; ds; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-DEC-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9640950-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _difference
                         301
                                                                                                                                  181
                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39a;
                                                                                                                                                                                                                                                                                                                                                                               7208
                CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                  GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                    GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                               CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nicotiana tabacum;
Agrobacterium tumefaciens
CCTTGGGGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                      GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                           CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                               CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                    ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fig
                                                                                                                                                                                                                                                                                                                                                                            BP; 1938 A; 1619 C; 1640 G; 2010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95US-0476864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96WO-US08692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29a-f; 224pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                    90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "base 4890 is given specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fabijanski
                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                      Score 2040.8; DB 18; Lengt Pred. No. 0; Mismatches 127; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laurian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <
                                                                                                                                                                                                                                                                                                                                                                            T; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RS;
                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                              other;
                                                                                                                                                                                                                                                                                                                                                    7208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : - used
| yield
                                                                                                                                                                                                                                                                                                                        2;
                       360
                                                  2625
                                                                              300
                                                                                                       2685
                                                                                                                                 240
                                                                                                                                                           2745
                                                                                                                                                                                      180
                                                                                                                                                                                                               2805
                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                    2865
                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                        2
                                 Ś
                                                               밁
                                                                                     5
                                                                                                                밁
                                                                                                                                         Ś
                                                                                                                                                                      8
                                                                                                                                                                                            δ
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
            밁
                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                    1664
                                                                                                                                                                                                                            1784
                                                                                                                                                                                                                                                     1141
                                                                                                                                                                                                                                                                                 1844
                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                                                                                     1904
                                                                                                                                                                                                                                                                                                                                                                                          1964
                                                                                                                                                                                                                                                                                                                                                                                                                                              2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2204
                                                                                                                                                                                                 1201
                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2504
                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                         TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC 1439
                                                                              GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                  ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                       GAGTCCTTCTCTCAGGGATAGAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                    CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCATTGGCGCTGGCATTTCCCGGACTCGTGGTGGCGAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
            TGAAGAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGAATAGCCAC
                                                                                                                    ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                      GAGTCCTTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                 GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                         GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                          CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGAAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAPATGCCGCCTTACGAGAPAAGGCACGACGAPACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGTGCTTGTTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                 1785
                                                                                                                                                                      1665
                                                                                                                                                                                                                                                      1200
                                                                                                                                                                                                                                                                                                          1140
                                                                                                                                                                                                                                                                                                                                                                                                                                             1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
           1486
                                                               1546
                                                                                                                    1606
                                                                                                                                            1319
                                                                                                                                                                                                 1259
                                                                                                                                                                                                                            1725
                                                                                                                                                                                                                                                                                                                                     1845
                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                          1905
                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
```

mutant

iaaM

gene

ipt

gene"

```
RESULT 7
AADOOG 5
ID AADOO
XX AADO
XX AADO
XX AADO
XX AADO
XX 10-A
DT 29-A
DT 29-A
XX BATO
XX I AAN
XX I AAN
XX Plan
XX Plan
XX Agro
XX Agro
                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                         & B
                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ર્શ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                              iaaM; iaaH; ipt; T-DNA; transferred DNA; gall-disease resistance;
bacterial resistance construct; untranslatable RNA; tumour; oncoge
                 Agrobacterium
                                                                                                       Agrobacterium tumefaciens ipt/iaaM untranslatable BR
                                                                                                                                        29-AUG-2000
                                                                                                                                                                     AAD00626;
                                                                                                                                                                                                    AAD00626 standard; DNA; 2544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                            885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      945
                                             growth hormone; ds.
                                                                                                                                                                                                                                                                                              TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA 2267
                                                                                                                                                                                                                                                                                                                                                         CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                  TTACTTGGCGGGTTGCAGTTGTTCCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGATTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATGGTAAAGGTCTGGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCCCAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGAAAGAAAAAAAAAAAAAAAAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAAGTGGTTAACGGTGTGTCTGTGAGCCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                            TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAATAGAAATTA
                                                                                                                                                                                                                                                                                                                                      CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGTATTTTGGCAAAGGACAA
                                                                                                                                                                                                                                                                                                                                                                                                  TTACTTGGCGGGTTGCAGTTGTTCCTTCACCGGTGGATGGGTGGAGGGCGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACATGACTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATGATTGGCTTACAGACGAGAATGCCGGGGGGGGGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCGGCGTTTGCCCAGCATCTAGTTCCCGCCTGCGCTGATTACGACCAAAATGTTGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGGTTCCCGACAAAAAAGAGCGATTCTGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                        (first
                  tumefaciens
                                                                                                                                                                                                    뭐
                                                                                                          construct
                                                                                                                                                                                                                                                                            658
                                                                                                                                                                                                                                                                                                                                                                                                                              2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1499
                                                                                                                                                                                                                                                                                                                                                                      2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1366
                                                                                                                                                                                                                                                                                                                                                                                                 766
                                                                                                                                                                                                                                                                                                                                                                                                                                                              826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1066
                                                                     Ś
                                                                                                         밁
                                                                                                                                                                   밁
                                                                                                                                                                                              Ś
                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                  5
                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 78.9%;
Best Local Similarity 99.8%;
Matches 1791; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium infection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaM, iaaH and ipt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium tumefaciens bacterial resistance construct, that encodes untranslatable RNA forms of both the mutant ipt and iaaM genes. This construct can suppress both shooty and necrotic gall formation in transgenic plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ream
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gall resistant plants generated by transforming cells with an untranslatable nucleic acid homologous to a gall disease-causing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2544 BP; 625 A; 592 C; 674 G; 653 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200026346-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYOR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-365599/31.
                                               618
                                                                                                          855
                                                                                                                                                                                                                                                                                                                                                      318
                  372
                                                                           312
                                                                                                                                       252
                                                                                                                                                                     498
                                                                                                                                                                                                  192
                                                                                                                                                                                                                               438
                                                                                                                                                                                                                                                             132
                                                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                                                                          72
                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      c; Page 44-45; 49pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UNIV OREGON STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mok MC,
AGCACAACTAATCCAAGCCCTGTTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT
                                                                GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA
                                                                                                                                                                                      GCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCCCGC
                                                                                                                                                                                                                                                  TAGGGGAAGGAGTTACTCAAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG
                                                                                                                                                                                                                                                                                                            CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                       ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
                                                                                                                            TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                      GCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTAGAAAGGTAGCAGTTCTCTCCGC
                                                                                                                                                                                                                                  TAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG
                                                                                                                                                                                                                                                                                            CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                      ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
                                                GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA
                                                                                                          TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0107185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US26100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/note= "Corresponds to Agrobacterium mutant
303..2105
/*tag= b
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Corresponds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H
                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1788.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 21; Length
                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
```

2544;

<u>.</u>

Gaps

0

377

431

```
1398
                                                                                                                                             1638
                                                                                                                                                                                                                  1578
                                                                                                                                                                                                                                                                                        1518
                                                                                                                                                                                                                                                                                                                                                                                                 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1338
                                                                                                                                                                                                                                                    1272
                                                                                                                                                                                                                                                                                                                            1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            738
                  CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                   GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                              TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                   CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                             TTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                GCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCCGGCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                      TTCAGGGATAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT 737
1817
                               1511
                                                                   1757
                                                                                                       1451
                                                                                                                                                                             1391
                                                                                                                                                                                                                                                  1331
                                                                                                                                                                                                                                                                                      1577
                                                                                                                                                                                                                                                                                                                                                                                                                                   1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1031
                                                                                                                                           1697
                                                                                                                                                                                                                1637
                                                                                                                                                                                                                                                                                                                        1271
                                                                                                                                                                                                                                                                                                                                                              1517
                                                                                                                                                                                                                                                                                                                                                                                               1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         551
```

```
밁
                  S
                                                   유
                                                                                                         문
                                                                                                                                 8
                                                                                                                                                               문
                                                                                                                                                                                  á
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                       S
                                                    1998
                                                                                                          1938
                                                                                                                                     1632
                                                                                                                                                               1878
                                                                                                                                                                                                                     1818
                                                                                                                                                                                                                                              1512
2058
                                                                               1692
                                                 CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA
                                                                                                                                                                             CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                 GACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCACCTCGT
                  CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGT 1806
                                                                                                                                    TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                     GACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGT
                                                                                                                                                               CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
2112
                                                                               1751
                                                                                                                                                                                        1631
                                                                                                                                                                                                                   1877
                                                                                                          1997
                                                                                                                                     1691
                                                                                                                                                                1937
                                                                                                                                                                                                                                              1571
```

ち 유

S 밁 ঠ 닭 δ

AAD00625 standard; DNA; 1807 ВP

AAD00625;

29-AUG-2000

(first

entry)

Agrobacterium tumefaciens T-DNA mutant iaaM gene

iaaM; iaaH; ipt; T-DNA; transferred DNA; gall-disease resistance; bacterial resistance construct; untranslatable RNA; tumour; oncoge plant growth hormone; mutant; ds. oncogene;

Agrobacterium tumefaciens

WO200026346-A1.

11-MAY-2000

04-NOV-1999; 99WO-US26100

05-NOV-1998; 98US-0107185

(UYOR-) UNIV OREGON STATE

ξ, MOX S <u>N</u> Lee Ξ

2000-365599/31.

Gall resistant untranslatable plants generated by transforming cells with an nucleic acid homologous to a gall disease-causing gene

Example c; Page 43-44; 49pp; English

중 유

Ś

음 성 B ঠ 밁 ঠ 밁 ঠ g S 밁 δ g 5 밁 Ś В S 밁

ð 8 ঠ В

ঠ 밁

The patent discloses a method for producing plants resistant to gall disease, induced by Agrobacterium infection, by transformation with a bacterial resistance (BR) construct capable of eliciting co-suppression. The construct encodes an untranslatable RNA molecule, that is highly homologous to the tumour or gall disease-causing genes iaaM, iaaH and lpt of Agrobacterium tumefaciens. These oncogenes are modified by introduction of premature termination codons or frameshift mutations, to inhibit their expression. This method is used to reduce susceptibility of plants to gall diseases. The present DNA sequence is the Agrobacterium cumefaciens T-DNA (transferred DNA) mutant iaaM gene. This oncogene was modified by introduction of a stop sequence (TGA) at the third codon and deletion of two bases following the third codon. This sequence was used for the construction of double stranded RNA and untranslatable dsRNA tectors. vectors, that reduce gall formation 'n. transformed plant cells

```
8 8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 1788; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
978
                                                                                                                                                                                                                                                                                                                                                                                552
                                                                                                                                                                                                                                                                                                                                                                                                                                  492
                       972
                                                918
                                                                                                                         852
                                                                                                                                                     798
                                                                                                                                                                            792
                                                                                                                                                                                                     738
                                                                                                                                                                                                                          732
                                                                                                                                                                                                                                                      678
                                                                                                                                                                                                                                                                                                       618
                                                                                                                                                                                                                                                                                                                                612
                                                                                                                                                                                                                                                                                                                                                         558
                                                                                                                                                                                                                                                                                                                                                                                                          498
                                                                                                                                                                                                                                                                                                                                                                                                                                                           438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                TCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTT
                                                                                                                                                  CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                                                                                                                                                                                                                                         GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1807
                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      428 A; 418 C; 486 G; 475 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78.8%; Score 1788; 100.0%; Pred. No. 0; vative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21; Length 1807;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>0</u>
                         1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77
  1037
                                                   977
                                                                                                                                                     857
                                                                                                                                                                              851
                                                                                                                                                                                                                             791
                                                                                                                                                                                                                                                       737
                                                                                                                                                                                                                                                                                                          677
                                                                                                                                                                                                                                                                                                                                 671
                                                                                                                                                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                                                                                                                                                                  611
                                                                                                                                                                                                                                                                                                                                                                                                           557
                                                                                                                                                                                                                                                                                                                                                                                                                                   551
                                                                                                                                                                                                                                                                                                                                                                                                                                                             497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197
                                                                            971
                                                                                                    917
                                                                                                                           911
                                                                                                                                                                                                       797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
RESULT 9
AAN6090
ID AAN60
XX AAN66
XX AAN66
XX EAN6
XX EAN6
XX IL-D
XX Ri p
XX Ri p
XX Ri p
XX Agro
XX
                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                       δ
              10-DEC-1986
                                      EP204590-A.
                                                                                                              TL-DNA region
                                                                                                                                         25-MAR-2003
28-OCT-1991
                                                                                                                                                                                                       AAN60970
                                                                                       plasmid;
                                                                                                                                                                                                                                                                                            1752
                                                                                                                                                                                                                                                                                                                     1698
                                                                                                                                                                                                                                                                                                                                               1692
                                                                                                                                                                                                                                                                                                                                                                      1638
                                                                                                                                                                                                                                                                                                                                                                                               1632
                                                                                                                                                                                                                                                                                                                                                                                                                       1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1098
                                                                                                                                                                                                                                                                   CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                    CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA
                                                                                                                                                                                                                                                                                                                                                                                     TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                      TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                       plant plasmid
                                                                                                                                       (updated)
(first entry)
                                                                                                              of A.rhizogene
                                                               rhizogenes
                                                                                                                                                                                                       DNA;
                                                                                                                                                                                                       21126
                                                                HRI
                                                                and
                                                                                                                 agropine-type plasmid pRiHRI.
                                                                                                                                                                                                        ΒP
                                                                A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                1631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1091
                                                                                                                                                                                                                                                                                                                                                                                                  1691
                                                                                                                                                                                                                                                                                                                                                                                                                          1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1157
                                                                                                                                                                                                                                                                                                                                                                         1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1277
```

**5 B 5** 

밁 S 8 중 음 중

유 원

음 성

문 ફ ક

문

S

밁

S 밁 ક 멍 ક 밁 ર્

밁

```
δ
                                                                                                                                  밁
                                                                                                                                                       ્ર
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                             중 유
                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The TL-DNA sequence is that of an Agrobacterium Ri plasmid, it contains sixteen open reading frames, bounded by eukaryotic promoters, ribosome binding and polyadenylation site. The plasmid sequence may be used for genetic manipulation of plants, conveying sequence may be used for genetic manipulation of plants, conveying plantypes such as improoved resistance to environmental stress, disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plant cell genetic control expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1986-327378/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for phaseolin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INRG ) INRA
   7873
                                  1220
                                                                                                                                                                                                                                      1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    parasitism.
                                                                                                                                                                                                                                                                                                                                        7573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7393
                                                                                                                                                                                                                                                                       7633
                                                                                                                                                                                                                                                                                                                                                                                                        7513
                                                                                                                                                                                                                                                                                                                                                                                                                                           860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al Similarity
623; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JĿ,
                                                                                                                                                                TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                    TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                     CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                  TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                       CCTTGACGTCGTCGGTCATGCCTTTCTCCGCCAACCAACTTTGCCTGTCATACTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21126 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on 25-MAR-2003 to correct PA field.)
   TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                               TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                    CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                  GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                     TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                     ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                        TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                      TCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCTTCTTTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INST NAT RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tepfer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85US-0725368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86EP-0400855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; 86pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5359 A; 4901 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modification - using pRi T-DNA promoter to of heterologous foreign structure genes, e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGRONOMIQUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 136.4;
Pred. No. 1.8e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5308 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.8e-32;
hes 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 21126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                    1099
                                                                                                                                                                                                                                                                                                                                        7632
                                 1275
                                                                    7872
                                                                                                                                                                                                                                                                                                       1039
                                                                                                                                                                                                                                                                                                                                                                                                       7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 682
                                                                                                                                                                                                                                                                     7692
                                                                                                                                                                                                                                                                                                                                                                                                                                          919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
RESULT 10
ABL1366
ID ABL13
XX ABL13
AC ABL13
XX Droso
                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                 Drosophila melanogaster expressed
                                                23-MAR-2001; 2001WO-US09231
                                                                                                                   WO200171042-A2
                                                                                                                                                  Drosophila melanogaster
                                                                                                                                                                                pharmaceutical; gene;
                                                                                                                                                                                                   Drosophila;
                                                                                                                                                                                                                                                                       26-MAR-2002
                                                                                                                                                                                                                                                                                                       ABL13666;
                                                                                                                                                                                                                                                                                                                                      ABL13666 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8412
                                                                                                                                                                                                                                                                                                                                                                                                                          8586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCCCGGCGTTTGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTGTCCGTGAGCTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCGCAAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCACGAAGCAAAAGTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCTGCCTTTCCTGAACTGGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                   developmental biology;
2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                    CDNA;
                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                      4734
                                                                                                                                                                                                                                   polynucleotide SEQ
                                                                                                                                                                                                   cell signalling;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1973
                                                                                                                                                                                                     insecticide;
                                                                                                                                                                                                                                    ij
```

8525

8585

1815

8411 1755 8351 1695 8291

8465

8171

1515

8231 1575

ö

```
RESULT 11
ABL1562
ID ABL15
XX ABL15
XX ABL15
XX Drose
XX Drose
XX Drose
XX Drose
XX Pharm
XX Pharm
XX Pharm
XX 10-080
XX Pharm
XX 10-080
XX W0200
XX 10-080
XX 11-01
XX 12-04
PR 11-01
XX PA (PEKI
XX Yente
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16176) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated nucleic acid
genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Venter JC,
                                                                  23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                        Drosophila melanogaster
                                                                                                                                                                                                                                   Drosophila; developmental
                                                                                                                                                                                                                                                             Drosophila melanogaster expressed polynucleotide SEQ ID NO 41468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4734 BP;
              Venter JC,
                                                                                                                                       27-SEP-2001.
                                                                                                                                                                  WO200171042-A2
                                                                                                                                                                                                                     pharmaceutical;
                                                                                                                                                                                                                                                                                         26-MAR-2002
                                                                                                                                                                                                                                                                                                                   ABL15662;
                                                                                                                                                                                                                                                                                                                                           ABL15662 standard; cDNA; 4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PEKE )
                                         (PEKE )
                                                                                                          23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                1339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; SEQ ID NO 35480; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB69563.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 52.(
89; Conservative
                                         PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATCAGAAGGT 1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTTGGCATTTCCGGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Adams M,
              Adams M,
                                                                  2000US-191637P.
2000US-0614150.
                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                     gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1394 A; 978 C; 1048 G; 1314 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.8%;
52.0%;
                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                      88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲.
              다.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PWD,
              PWD,
                                                                                                                                                                                                                                   biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 39.8;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                              ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
              Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       띺
              E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 4734;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
```

```
RESULT 12
ABL13667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        capable of detecting 1000 or more genes from Drosophila. The inventuseful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4800 BP; 1265 A; 1116 C; 1141 G; 1278 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence data for this patent did not form specification, but was obtained in electronic fat ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid
genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-656860/75.
P-PSDB; ABB71559.
New isolated nucleic a
genes from Drosophila
                                                                                                                               23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                    23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                               27-SEP-2001
                                                                                                                                                                                                                                                  Drosophila melanogaster.
                                                                                                                                                                                                                                                                           pharmaceutical;
                                                                                                                                                                                                                                                                                       Drosophila;
                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster expressed polynucleotide SEQ ID NO 35483
                                                                                                                                                                                                                                                                                                                                            26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                      ABL13667;
                                                                                                                                                                                                                                                                                                                                                                                              ABL13667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 41468; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   interactions
                                       P-PSDB; ABB69564.
                                                                                                                                                                                                                       WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4556 GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        690 TCCGGAGGATGTTCCTAAGCCGAAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          750
                                                                             ďĊ,
                                                                                                       면
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTGT 860
                                                                                                                                                                                                                                                                                                                                                                                              standard; cDNA; 1872
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATCAGAAGGT 4666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA
                                                                                                        CORP NY
                                                                                                                                                                                                                                                                                        developmental biology;
                                                                             Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                               2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                            gene;
                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.8%;
 acid
a and
                                                                              5
                                                                              PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 39.8;
Pred. No. 0
                                                                              Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed. No. 0.28
Mismatches
                                                                                                                                                                                                                                                                                          cell
                                                                                图
                                                                                                                                                                                                                                                                                          signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               n part of the printed
format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4800;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification, at ftp.wipo in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABBS7737-ABB72072).
  Claim
                                  Apoptosis inducing protein
                                                                                                                                                                    22-MAY-1998;
                                                                                                                                                                                           26-NOV-1998.
                                                                                                                                                                                                                                                                                        Scomber
                                                                                                                                                                                                                                                                                                               apoptosis
                                                                                                                                                                                                                                                                                                                           Cell death;
                                                                                                                                                                                                                                                                                                                                                   Nucleic acid
                                                                                                                                                                                                                                                                                                                                                                           23-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                        AAX15122 standard; cDNA to mRNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1872 BP; 499 A; 477 C; 524 G; 372 T; 0
                                                                                             Iwamoto M,
                                                                                                                     (TENS-)
                                                                                                                                                                                                                  WO9852972-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences.
                       as anticancer agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence data for this patent did not form part of the printed cification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           invention relates to an isolated nucleic acid detection
                                                                       1999-070139/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              690 TCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGT
5; Page 32-34; 47pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66;
                                                                                                                                                                                                                                                                                       japonicus
                                                           AAW96805
                                                                                                                    TENSEI SUISAN CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGGGTGGGCGGACGCATTGTGTCCATACCGCTCAGCAATAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCTGCAAATCACCTTTTGCAAAACGGCTGTGACGATTTCCTTATTCTGGAGGCACGGGG
                                                                                                                                                                                                                                                                                                              inducing
                                                                                             Jung S;
                                                                                                                                                                                                                                                                                                              apoptosis; inhibition; proliferation; cancer cell; iducing protein; AIP; chub mackerel; anticancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                 encoding an apoptosis inducing protein
                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                             97JP-0133549
                                                                                                                                                                    98WO-JP02261.
                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35483; 21pp + Sequence Listing;
                                                                                                                                                                                                                                          р
                                    from mackerel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 39.2; DB Pred. No. 0.25; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        1575
                                                                                                                                                                                                                                                                                                                                                                                                                        BP
                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78;
                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other;
                                  encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                    įt
                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
ABZ56743
ID ABZ56743
ABZ56743
AC ABZ56
XX ABZ56
XX ABPER
XX ASPER
XX (NAAI
PA (NORC
XX WPI;
YX DETEC
PT TAKER
XX Claim
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  %88888%&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                             The invention relates to a polynucleotide having any of 6006 specific sequences (ABZ50808-ABZ56893), which are expressed by a fungus under specific culture conditions including one or more of eutrophic, oligotrophic, solid, early germination, alkaline, high temperature, low temperature or maltose culture or polynucleotides stringently hybridising to these sequences. The polynucleotides are useful for monitoring the progress of fermentation and the growth conditions of a fungus, especially of Aspergillus oryzae which is widely used in industrial fermentation. Also monitoring for fungal contamination.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence encodes a protein which induces cell death (apoptosis) and inhibits the proliferation of cancer cells. The protein (apoptosis inducing protein, AIP) is isolated from chub mackerel. The protein can be used as an anticancer agent and as reagent for study of the mechanisms of apoptosis in vitro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspergillus oryzae; expressed sequence t
                          specification, but was obtained in electron;
at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Detection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Machida M,
Takeuchi M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NAAD-) NAT INST ADVANCED IND SCI & (NARE-) NAT RES INST BREWING. (NORQ ) NAT FOOD RES INST MIN AGRIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-MAR-2002; 2002WO-IB00890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200279476-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspergillus oryzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aspergillus oryzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABZ56743;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABZ56743 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1575 BP; 436 A; 358 C; 406 G; 375 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001JP-0098371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                         fermentation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003-046817/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           713 AAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATG
                                                                                                                                                                                                                                                                                                                                                            ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                            OBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGG---ACACACGGTAACCATATTGGAGGCTAATGATCGTGTTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              o
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Akita O,
Kobayashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                 expression of a
                                                                                                                                                                                                                                                                                                                                                      ID NO 5856; 48pp + Sequence Listing; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tag;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA; 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fermentation;
tag; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kashiwagi Y,
i T, Kitamot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                    specific Aspergillus genes n conditions of the fungus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kitamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 38.6;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCI & TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fungus; industrial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kitamoto
N, Gomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO 5856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ح ح
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Horiuchi H;
Abe K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 for monitoring using DNA probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1575;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              772
```

```
RESULT 15
AAC05199
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                        The present sequence is one of a large number of 5' ESTs derived from mRNAs encoding secreted proteins. No ORF has yet been conclusively identified within the present sequence. The 5' ESTs were prepared from total human RNAs or polyA+ RNAs derived from 30 different tissues. EST sequences usually correspond mainly to the 3' untranslated region (UTR) of the mRNA because they are often obtained from oligo-dT primed cDNA libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intactl 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design
                                                                                                                                                                                                                                                                                               New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and for diagnostic, forensic, gene therapy and chromosome mapping procedures -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 468 BP; 124 A; 141 C; 111 G; 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human secreted protein 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAC05199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC05199 standard; cDNA;
                                                                                                                                                                                                                                                                Claim 1; SEQ ID 9274; 71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-500381/45
                                                                                                                                                                                                                                                                                                                                                                                                 Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-FEB-2000; 2000EP-0200610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP1033401-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene therapy; chromosome mapping; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; 5' EST; expressed sequence tag; secreted protein; cDNA isolation;
               expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    886 TITCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     284 TTCCGAACCAAACTCGTAGGGAACACAG---GCGAATGGGCCGARATGGGGCCCATGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224 GATAGCGTCGGAATCCACAATTGGGAAATACTCGAAGCGAGTAACCGGGTAGGAGGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    164 AACACCÁCAATCGCCATCÁTCGGCGCCGGCÁTCTCAGGCCTCACAGCCGCCCTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CIGCCI 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTGGTCACATGCTTTCAGGGAACGCTCCTAGTGTCGTGGCCGAAATGGGGCGGATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
               and secretion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.7%;
                                                                                                                                                                                                                                                                                                                                                                                                 Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 0.19
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 38.4; DB 25; Length 468; Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO: 9274.
                                                                                                                                                                                                                                                                                                                                                                                                  Giordano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                  J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
```

```
Search completed: November 23, 2003, 21:01:38 Job time: 607.746 secs
                                                밁
                                                                      δ
                                                                                              밁
                                                                                                                     Ś
                                                                                                                                               밁
                                                                                                                                                                  Ş
                                                                                                                                                                                                                                               SS
                                                                                                                                                                                              Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                               Sequence 273 BP; 53
                                                                                                 157
                                                                                                                                                                         867
                                                217
                                                                         987
                                                                                                                         927
                                                                                                                                               97
                                                                                                                                                                                                90;
                                                                                                                                                                                                          Similarity
                                                                                                 AGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACCCCTGACCTCAAGTGATCAGC 216
                                                                                                                       CGAAATGGGGGCGATTTCCTCCTCCTGCTTCTGCTTCTTCTTCTTCCTCGAGCG
                                                                                                                                                CGATCTGGGCTCGATGCAACCTCTGCCTCCCAGGTTCAAGCAATTTTCCTGCCTCGGCAG 156
                                                                         CTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGTTCCA 1043
                                                 CCÁCCTCGGCTTCCCAAAGTGCTGGGATTACAGGTGTGATCCACTGCACCCGGTCCA
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                          1.7%;
                                                                                                                                                                                                                                                A; 73 C;
                                                                                                                                                                                                0,
                                                                                                                                                                                                                                               66 G;
                                                                                                                                                                                                           Score 37.8;
Pred. No. 0.
                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                80 T; 1 other;
                                                                                                                                                                                                          . 21;
                                                                                                                                                                                                                        DB 21;
                                                                                                                                                                                                 87;
                                                                                                                                                                                                                        Length
                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                         273;
                                                                                                                                                                                                 0
                                                                                                                                                                                                 Gaps
                                                 273
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-434-837-10
2268
1 atgtcagcttcacct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       November 23, 2003, 20:47:41; Search time 8367.46 Seconds (without alignments) 11088.547 Million cell updates/sec
          2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atgtcagcttcacctctcct.....actaccgcagtagaaattag 2268
gb ba: *
gb in: *
gb in: *
gb in: *
gb ov: *
em hum: *
em ow: *
em ow: *
em ov: *
em
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5777422
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

M60490 Agrobacteri	ATUORF	2733 1	2.1 1	48.4	4 4 5 t	c
. د	AX6000095		. <u>;</u>	9 0		,
_	AK118627	1559 8	) N	5 C L	4 2	
	AE016857	φ		'n	41	Ω
ø	ATU16787	167 1	6	้ด	40	
02086	AP002086	594	.1 2	.9	39	
271050 Agrobact	ARH271050	110		۰	38	
Agrobacter		754	ທ	101.4	37	
3 Sequence 1		126		•	36	
0 Sequence	104770	126		•	35	
20 Sequenc		126		•	34	
ntegrate	70	126		•	33	
Sequence		7	6.0	136.4	32	
Sequence	⊳	279 6	٠	•	31	
2 Binary	N	643 1	ر د	Un I	ω 0	
Binary	N	595	ۍ <u>.</u>	358	29	
Binary	N	582	ı.	U I	28	ი .
	N	439 1		358	27	n i
Binary	2 ATU41410	341 1		л	20 (	י מ
108 Binary	N	669	5	ω G	N 1	ი
	PSU04358	4797 1	ი	82	24	
5 P.svringae	PSEIAAMH	67	17.5	96.	23	
7 Pa	ERWIAAM	937	7.	98.	22	
22 Agroba	AB032122	2724 1	•	24	2	
27	AVIAAM	6482 1	œ	<b>~</b>	20	
Plasmid		516	_	93.	19	
Agrobact	⊳	995	6	29.		
61780	⊳	38	_	49.	17	
264	AF126447	7	2.4	960.		
U83986 Agrobacteri	×		.7 1	1581.4	15	
U83987 Agrobacteri		ω	2.9 1	880.		
XS6185 A.tumefacie		0200 1	2.9 1	88		
AJ237588 Agrobacte	ATU237588	24	8.9 2	٥,		
0 Agrobact		660		03	11	
26446		œ	0.1	2	10	
Agrobact	AB016260	79	0.1 20	2044	9	
9 Agrobact	AE009419	377	0.1 1	2044	89	
07927 A	AE007927	_	0	2	7	
2554 Ti plasmid	TIPMS2	91	8.1	ŗ	σ	
F242881 Ag	AF242881	414	8.4 19	2230.6	ហ	
00546 DNA	E00546	4595	8.4		4	
Ti plasm	E00404	4595	8.4		w	
D016312 Metho	BD016312	4595	8.4		N	
obacter	ATACH5	4595	8	2230.6	ь ;	
scription	ij	ı ÜQ	닭,	COR	No.	
			Query		Result	Re
			æ			

## ALIGNMENTS

REFERENCE AUTHORS TITLE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	ATACH5	RESULT 1
<pre>1 (bases 1 to 24595) Barker,R.F., Idler,K.B., Thompson,D.V. and Kemp,J.D. Nucleotide sequence of the T-DNA region from the Agrobacterium .</pre>	Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.	Agrobacterium tumefaciens	<pre>unidentified reading frame. Agrobacterium tumefaciens (Rhizobium radiobacter)</pre>	octopine synthetase; plasmid; synthetase; terminal repeat;	X00493.1 GI:39062	X00493 J05108 X00282	Agrobacterium tumefaciens Ti plasmid pTi15955 T-DNA region.	ATACH5 24595 bp DNA linear BCT 10-FEB-1999		

Pred. No.

is the number of results predicted by chance to have a

```
JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                               Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                            conflict
                                                                                                                                                                                                                                                          conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Guevara-Garcia, A., Mosqueda-Cano, G., Arguello-Astorga, G., Simpson, J. and Herrera-Estrella, L.
Tissue-specific and wound-inducible pattern of expression of mannopine synthase promoter is determined by the interaction between positive and negative cis-regulatory elements
Plant J. 4 (3), 495-505 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plant Mol. Biol. 2, 335-350 (1983)
2 (bases 602 to 14237)
3 (bases 602 to 14237)
Gielen, J., De Beuckeleer, M., Seurinck, J., Deboeck, F., De Greve, H.,
Lemmers, M., Van Montagu, M. and Schell, J.
The complete nucleotide sequence of the TL-DNA of the Agrobacterium tumefaciens plasmid pTiAch5
EMBO. J. 3 (4), 835-846 (1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 (bases 1 to 24595)
Turk, S.C., Nester, E.W. and Hooykaas, P.J.
The virA promoter is a host-range determinant in Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tumefaciens octopine Ti plasmid pTi15955 Plant Mol. Biol. 2, 335-350 (1983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8220492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94035196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8469115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mol. Microbiol. 7 (5), 719-724 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 24595)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="swiss-prot:p04028"
/translation="wydgopirwiidssnlodrrelklylihtenayrssaorslias
/translation="wydgopirwiidssnlodrrelklylihtenayrssaorslias
QRSWINFILNTDVPIDAKDEVVKSRKVACCDDPTDIPFDILNVSLLYVYCSFOEMR
RYAQORFYDGVSDGGAVISTVPPYABGITKQTWRLWQKKVWQNTSKETHDLDAYIALL
                                                                                                                                                                                                                                                                            /db_xref="Sptrembl:044387"
/translation="Mcffactipnffipophslfcysfgigwdgddncasvgnavies
Llcipshfikaainvogayieyikgyicwvwaarnfaraldhfvfswingnisindei
ypralrsyetslcrtaisilcvn"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (1736.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PNLRFKIQISHI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
               /transT_table=11
/protein_id="CAA25165.1"
/db_xref="GI:39065"
                                                                                                                               complement (2907. .3287)
                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/transl_table=11
/protein_id="CAA25164.1"
/db_xref="GI:39064"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note="T-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Agrobacterium tumefaciens"
/mol_type="genomic DNA"
/db_xref="taxon:358"
                                                                                                      note="open reading frame
                                                                                                                                                   citation=
                                                                                                                                                                     note="T is CG in [2]"
                                                                                                                                                                                                                  citation=[2]
                                                                                                                                                                                                                                      note="C is T in
                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein_id="CAA25163.1"
db_xref="GI:39063"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plasmid="Ti"
                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="C is T in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="direct repeat A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 24595
xref="SWISS-PROT:P03867"
                                                                                                                                                                                                                                      [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .2113)
                                                                                                      Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sg
                                                                                                                                                                                                                  conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     conflict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 conflict
                                                                                                                                                                                                                                                                                 conflict
```

/trans1\_table=11 /protein\_id="CAA25169.1" /db\_xref="GI:39069"

codon\_start=1/ transI\_table=

7778. .8113

note="open reading frame

7"

citation=

note="T is C in

[2]

note="TC is

G ä.

[2] "

citation=[2]

/db\_xref="SPTREMBL:Q44390" /translation="MLFNMIGLQTRMPGELSNSTGVVRIFILKNFSFKHWTRLMIPEF

/transT table=11 /protein\_id="CAA25168.1" /db\_xref="GI:39068"

db\_xref="SPTREMBL:Q44389"

'translation="MKQFVCHHESGNASANDRHFRLRNILRKEADPSTIGTLVKKRSV VVEQVDCWKGTCRTLQHQVSTISYHVKWHGPFKGYGKPGNAFHRAILVQRHWQGSKAG

```
/translation="MSASPLLDNQCDHLPTKMVDLTMVDKADELDRRVSDAFLEREAS
RGRRITQISTECSAGLACKELADGREPEISAGGKVAVLSAYIYIGKEILGRILESKEW
ARATVSGLVAIDLAPECMDFSEAQLIQALFLLSKKCAPIDLSHEVAISISKTAGFRT
LPMPLYENGTMKCVTGFTITLEGAVPFDMVAYGRNLMLKGSAGSPFTIDLLYDYRPFF
DQCSDSGRIGFPEDVPKPKVAVIGRAISGLVVANELLHAGVDDVTIYEASDRVGGKL
WSHAFRDAPSVVAEMGAMRFPPAAFCLFFLERYGLSSMRPPRDGTUDTYLVYQGVQ
YMWKAGQLPPKLFHRVYNGWRAFLKDGFHERDIVLASPVAITQALKSGDIRWAHDSWQ
IWLNRFGRESFSGIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVFESGFI
EILBLVINGYEENQRWGPEGISELPRRIASEVVNGVSVGRICHVQVRALQKEKTKIK
IRLKSGISELYDKVVTVSGLANIQLARCLTCOTNIFOAPVNQAVUNGANTGSKJELWPD
TERKFWLDHILPSCVLMDGIAKAVYCLDYESQDPNGKGLVLISYTWEDDSHKLLAVPD
KKERLCLLRDAISRSFPAFAQHLFPAGADYDQNVIQHWLTDENAGGAFKLNRRGEDF
KKERLCLLRDAISRSFPAFAQHLFPAGADYDQNVIQHWLTDENAGGAFKLNRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="mvaitslaqslehlkrkdysclelvetliarceaakslnallat dwoglrrsakkiion="mvaitslaqslehlkrkdysclelvetliarceakslnallat dwoglrrsakkiionekiiskiisrv aerlesagalrepasgwhensyalgavrnpwpdlipgssggvaaavas lerlesagalpasgwhensyalgavrnpwpdlipgisggvaaavas lmlggitdtgasvhlpaalcovagrptlgrpgdriipvspyrdtpgiiaqcvadv vildriisgtperippvelkglriglpttyfyddldadvalaaettirllankgvtfy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EANI PHLDELNKGAS FPVALYE FPHALKQYLDD FVKTVS FSDVI KGIRS PDVANI ANA
QIDGHQISKA EYELARHS FRPRLQATYRNY FKLNRLDAILF PTAPLVAR PIGQDSSVI
HNGTMLDT FKIYVRNVDPSSNAGLPGLSIPVCLT PDRLPVGMEIDGLADSDQRLLAIG
                                   complement (6259. .6579)
                                                                              PLEHSWKRYNYRTRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5809. .8076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GALEEAIGFRYFAGLPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (4060. .5463)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3369. .3370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="mnfadtplasldldwaceefiktygaspqletgeviqtnnglly
Lygkgslsqrihdthlkfkekeelsfttikpaemkaqqsdltyyvaifqsnyflcvsn
Pekgflrchnrpflypivahgsms"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /transT table=11
/protein_id="CAA25167.1"
/db_xref="GI:39067"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /transT_table=11
/protein_id="CAA25166.1"
/db_xref="GI:39066"
/db_xref="SWISS-pROT:p03868"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="TC is TCG in [2]"
                                                                                                                 YSEELFFQALDTANDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="AA is A in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      citation=[2]
note="open reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="SPTREMBL:Q44388"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        citation=[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="open reading frame 4 gene tms"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note="T is C in [2]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note≂"open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ហ
       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene tms"
```

B 8 8 8 8	D Q D Q	D Qy	Que Bes Mat				
241 GTTCTCTCCGCTTATATCTATATTGGCAAAGAATTCTGGGGCGGATACTTGAATCGAAA	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA	1 ATGTCAGCTTCACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAA	/db_xref="01:39071" /db_xr	/note="TT is T in [2]" /citation=[2] /citation=[2] /p99610571 /note="open reading frame 9" /codon stars table=11 /transl table=11 /protein_id="CAA25171.1"	/translation="MDLHLIFGPTCTGKTTTAIALAQQTGLPVLSLDRVQCCPQLSTG SGRPTVEBLKGTTRLYLDDRPLVBCII TAAKQAHHRLIEBYYNHBANGGLILEGGSTSL LNCMARNSYWSADFRWHIIRHKLPDQETFMKAAKARVKQMLHPAAGHSIIQELVYLWN EPRLRPLIKEIDGYRYAMLPASQNQITADMLLQLDANMEGKLINGIAQEYFIHARQQE QKFPQVNAAAFDGFEGHPFGMY"  conflict 9564 //note="T is C in [2]" /citation=[2] /conflict 99269927	CDS /citation=[2]  R711. 9493  /note="open reading frame 8 gen /codon start=1 /trans1_table=11 /protein id="CAA25170.1" /db xref="G1:39070" /db xref="SWISS-PROT:P03869"	TWRVAVVPSQVDGWRVLFRPRVTPSVQLSTIVEAFWQRAILSNTLGRDITTALEISLW ILLQVLQVL" 7961 7961 /note="T is A in [2]" /citation=[2] conflict 7964 /note="A is G in [2]" /citation=[2] conflict 79687969 /note="CG is GC in [2]" /citation=[2] conflict /note="CG is GC in [2]" /note="CG is GC in [2]" /note="A is G in [2]"
TGGGGCGGATACTTGAATCGAAA 300	180 5988 240 6048	5868 120 5928			TAIALAQQTGLPVLSLDRVQCCPQLSTG QAHHRLIESVYNHEANGGLILEGGSTSL KAAKARVKQMLHPAAGHSIIQELVYLWN LLQLDANMEGKLINGIAQEYFIHARQQE  Qy Db	ne tmr" Db	TVEAFWQRAILSNTLGRDITTALEISLW  Qy  Db  Qy  Db  Db
1320 GTTTGGTCCAGTTTTTGAAAGCGGTTTATTGAGATCCTCCGCTTGGTCATCAACGATA 1379  [	GASTCCTTCTCTCAGGATAGAAGATCTTTCTGGGCACAATCCTCCTGGTGGTAAACAGGATCCTTCTCTGGGCACAACATCCTCCTGGTGGTGAAACAGCCTACTTCCTCAGGGATAGAAGAGGATCTTTCCTGGGCACACATCCTCCTGGTGGTGAAACATGGGAATAGGATCTGGCGGAACAGGTTTTCCTCATGATTGGGACCTAATCAAGCTAATGGGAATAGGATCTGGCGGGAATAGGATTTCCTCATGATTGGGAACTAATGGAATAGGATCTGGCGGGAATAGGATTTCCTCATGATTGGGAACTAATGGAATAGGATCTGGC-GGAATAGGATTTCCTCATGATTGGGAACTAATGGAATAGGATCTGGC-GGAATAGGATTTCCTCATGATTGGGAACTAATGGAATAGGATCTGGC-GGACTGGATTGGAT	GETTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATACTCAGGCCTTGAAA  TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG	CCCGCACAGICCACACITACITGGICTACCAGGCGICCAATACATGIGGAAAGCCGGCICCACAGICCAGGCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCACAGICCATACATGIGGAAAGCCGGGCCACCACACACACAGITCTTGAAGGACCAGCCACCACCAAGAGCTGTTCCATCACACAGGTTACAACAGGTTGGCGTTCCTTGAAGGACCAGCTGCCACCGAAGCTGTTCCATCACCCGTTTACAACGGTTTGGCGTTCGTT		721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                RESULT 2
BD016312
LOCUS
DEFINITION
                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                              음 성 음 성 음
                                                                                                                                                                                                                                                                                                                                                               중 유
                                                                                                                                                                                                                                                                                                                                                                                                       중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     & & &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                        COMMENT
Agrobacterium tumefaciens (Rhizobium radiobacter)

Barcbacterium tumefaciens

Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;

Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.

E 1 (bases 1 to 24595)

IS Barker, R. F. and Kemp, J.D.

Method of promoting plant transcription by using octopine T-DNA

Patent: JP 2001190289-A 1 17-JUL-2001;

MYCOGEN PLANT SCIENCE INC

OS Agrobacterium tumefaciens
PN JP 2001190289-A/1

PD 17-JUL-2001
                                                                                                                                                                                                                              8028
                                                                                                                                                                                                                                                                                                                                                                                                             1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1860
                                                                                                                                                                                                                                                                                                           7908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1620
                                                                                                                                                                                                                                                                                                                                                                       2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1560
                                                                                                                      promoter.
BD016312.1 GI:22557450
JD 2001190289-A/1.
                                                                                                                                                               BD016312
Method of promoting
                                                                                                                                                                                                                            TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                                                                                                                                             CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                  GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                      ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGGTCCCCGACAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                       TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                          ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCGGCGTTTGCCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                           TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                24595 bp DNA plant transcription
                                                                                                                                                                linear PAT 27-AUG-
by using octopine T-DNA
                                                   octopine T-DNA
                                                                                                                                                                                                                             8076
                                                                                                                                                                                                                                                2268
                                                                                                                                                                            PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                  7787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1619
                                                                                                                                                                                                                                                                                        2219
                                                                                                                                                                                                                                                                                                                              2159
                                                                                                                                                                                                                                                                                                                                                                                                             2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1739
                                                                                                                                                                                                                                                                     8027
                                                                                                                                                                                                                                                                                                           7967
                                                                                                                                                                                                                                                                                                                                                   7907
                                                                                                                                                                                                                                                                                                                                                                       2099
                                                                                                                                                                                                                                                                                                                                                                                         7847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7547
                           á
                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                δ
            밁
                                                   유
                                                                                    밁
                                                                                                          δ
                                                                                                                                  밁
                                                                                                                                                 δ
                                                                                                                                                                    밁
                                                                                                                                                                                          δ
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                     6469
                                                                                            6409
                                                                                                                                    6349
                                                                                                                                                                            6289
                                                                                                                                                                                                                    6229
                                                                                                                                                                                                                                                           6169
                                                                                                                                                                                                                                                                                                  6109
                                                                                                                                                                                                                                                                                                                                         6049
                                                                                                                                                                                                                                                                                                                                                                                 5989
                                                                                                                                                                                                                                                                                                                                                                                                                         5929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                5869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5809
                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                               601
                                                                                                                                                      541
                                                                                                                                                                                                481
                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
```

```
Query Match
Best Local Similarity
Matches 2258; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      promoting
DNA promot
FH Key
FT sourc
                 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                               GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                      TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                         CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                          CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                            CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                        GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAA
                                                                                                                                                                                                      CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                      CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                         CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-NOV-2000 JP 2000356816
18-NOV-1983 US
813786
RICHARD E BARKER, JOHN D KEMP
C12N15/09, A01H5/00, C12N5/10, C12N15/00, C12N5/00
oting plant transcription by using octopine T- (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism='Agrobacterium
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Agrobacterium
/mol_type="genomic DNA"
/db_xref="taxon:358"
5509 c 5793 g 6759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98.4%;
99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  core 2230.6;
red. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumefaciens'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဂ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Method
                                   780
                                                                                                                                                                                                                                                                                                                                         6288
 6588
                                                                                                                                      6468
                                                                                                                                                                                                                                                                                                                                                                                                            6228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5868
                                                                    6528
                                                                                                                                                                    660
                                                                                                                                                                                                      6408
                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                        6348
                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
```

```
밁
                                           δ
                                                                     뮍
                                                                                           5
                                                                                                                       멍
                                                                                                                                         S
                                                                                                                                                                       밁
                                                                                                                                                                                         δ
                                                                                                                                                                                                                B
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ર્ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                               1680
                                                                                                                                                                       7428
                                                                                                                                                                                                                                                                                                                     7248
                                                                                                                                                                                                                                                                                                                                                                       7188
  1860
                                                 1800
                                                                                                                                                                                                                                                                                                                                             1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                   GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                     TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                  GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                   TAAGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                  TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                  TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTATGA
                                                                                                                      GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                    TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                     TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                   TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                   TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                   TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                    TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                          TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGCTTGTTTTTCTTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAGGGACGCTCCTAGTGTGTGGCCGAAATGGGGGGGGATGCGATTTCCTCCTGCTGCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rcttcagggatagagäggatctttctgggcacacatcctcctggtggtgaa
1919
                                             1859
                      7667
                                                                       7607
                                                                                             1799
                                                                                                                      7547
                                                                                                                                            1739
                                                                                                                                                                    7487
                                                                                                                                                                                             1679
                                                                                                                                                                                                                     7427
                                                                                                                                                                                                                                            1619
                                                                                                                                                                                                                                                                    7367
                                                                                                                                                                                                                                                                                          1559
                                                                                                                                                                                                                                                                                                                                                                                          1439
                                                                                                                                                                                                                                                                                                                                                                                                                    7187
                                                                                                                                                                                                                                                                                                                                                                                                                                          1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                                                                                                    7307
                                                                                                                                                                                                                                                                                                                                                                    7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6648
                                                                                                                                                                                                                                                                                                                                            1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
E00404
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭉
                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7668
```

```
The included in the product of the p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E00404 24
Ti plasmid T-DNA region.
E00404 1 GI:2168687
JP 1985156333-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Agrobacterium tumefaciens (Rhizobium radiobacter)
Agrobacterium tumefaciens
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCACTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGGTCCCCGACAAAAAGGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 29-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7727
```

δ δ		B 4	S B	Q	g &	B &	g qq	gb Qy	ъ <i>б</i>	Вb	8	B 8	B 8	Db Qy	Db	δ	g Q	B 8	Best Loc Matches	ORIGIN	BASE COUNT	FEATURES sourc
01 TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGGCGGTTCCCCAAAT 9	841 TTCAGGGACGCTCCTAGTGTGTGGCCGAAATGGGGGGGATGCGATTTCCTCCTGCTGCA 900	89 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT	6529 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 6588 781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	541 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600 [	81 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC	a a	GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA	361 GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420	301 CCTTGGGCGCGAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360	241 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300	181 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240	5929 CGAGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA 5988	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA	61 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120	1 ATGTCAGCTTCACCTCTCGATAACCAGTGCGATCATCTCCCCAACCAA	al Similarity 99.5%; Pred. No. 0; 2258; Conservative 0; Mismatches 9; Indels 2; Gaps	tch 98.4%:	/organism - Agrowal Cottom Commits DNA" /mol_type="genomic DNA" /db_xref="taxon:358" 6534 a 5509 c 5793 g 6759 t	O
Qy	99 99	문	Ş	당 성	C D .	g &	Q β	dg dg	Qy Db	Q 1	B 8	Db 49	8 8	OV Db	\$ §	} &	90	B B	& B	γQ	gg Qy	DЬ
1980 ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAAACGGCGTGGTGA 2039	1920 CCCGGCGTTTGCCCAGCACCTATTTCCTGCCCTGCGCTGATTACGACCAAAATGTTATTCA 7787 7728 CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA 7787	668	GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT	7608 GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT 7667			428 680				1440 TGAAGTGGTTAACGGTGTGTGTGAGCCACGCATATGCCATGTTCAAGTCAGGCGAT 1499 					1201 GAGTCCTTCTCTARGGATAGAGAGAGATCTTTCTGGGCARARGATCCTCCTGGTGGT-AA 1259 		889	6829 CAGCTGCCACCGAAGCTGTTCCCATCGCGTTTACAACCGGTTGGCGTGCGT	1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC 1080	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020	

Query Ma Best Loc Matches Qy	BASE COUNT ORIGIN	FEATURES source					COMMENT	REFERENCE AUTHORS TITLE JOURNAL	SOURCE ORGANISM	DEFINITION ACCESSION VERSION KEYWORDS	RESULT 4 E00546 LOCUS	δ 4g	g 49	₽ Q	B 8	рь
98.4%; Score 2230.6; DB 6; Length 24595; Local Similarity 99.5%; Pred. No. 0; ses 2258; Conservative 0; Mismatches 9; Indels 2; Gaps 2; 1 ATGTCAGCTTCACCTCCTTGATAACCAGTGCGATCATCTCCCAACCAA	/ Organising Agrowacterium cumeracters / mol type="genomic DNA" / db_xref="taxon:358"   T 6534 a 5509 c 5793 g 6759 t	FT CDS >1. <24595 FT /gene='ocs' FT /product='octopine synthetase'. FT Location/Qualifiers  124595 Ce 124595	FT CDS >1<24595 FT /gene='tmr' FT CDS >1<24595 FT CDS /1<24595	CC hypothetical: No; CC anti-sense: No; FH Key Location/Qualifiers FH	C12R1:01),  PC (C12N5/00,C12R1:91);  CC strandedness: Single;  CC topology: Linear:	PF 19-NOV-1984 JP 1984244307 PR 18-NOV-1983 US 83 553786 PI RICHIYAADO EFU BEIKAA, JIYON DEI KENPU PC C12N15/00,A01H1/00,C12N1/20,C12N5/00//C07H21/04.(C12N1/20, PC	AGURIJIENETEIKUSU RES ASSOC LTD OS Agrobacterium tumefaciens PN JP 1985256383-A/1 PD 18-DEC-1985	1 (bases 1 to 24595) Richiyaado, E.B. and Jiyon, D.K. PROMOTOR OF OCTOPINE T-DNA Patent: JP 1985256383-A 1 18-DEC-1985:	Agrobacterium tumefaciens (Rhizobium radiobacter) M Agrobacterium tumefaciens Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.	DNA fragment of T-DNA of Ti-plasmid,pTi15955. E00546 E00546:1 GI:2168825 JP 1985256383-A/1.	E00546 24595 bp DNA linear PAT 29-SED-1997	2220 TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG 2268	2160 CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA 2219	2100 TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC 2159	2040 GGATTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT 2099	
D Q D 4	Q & Q	Qy Oy	& B &	B &	dg Q	D Q	g q	gg Qy	dg QQ	Db Qy	gg Qy	g Qy	dg VQ	Db Qy	Qy dd	Db
29 CAGCTGCCACGAAGCTGTTCCATCGCCTTTACAACGGTTGGCGTTCATGAAGGAC 688 81 GGTTTTCATGAGCGAGATATTGTGTTGGCGTTCGCCTGCGCTATTACTAGGCCTTGAAA 114 81 HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020	6649 TICAGGGACGCTCCTAGTGTCGTGGCGAAATGGGGGCGATGCGATTCCTCCTCCTGCTGCA 6708 901 TICTGCTTGTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960	781 GACGATETTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	721 GTCATIGGCGCIGGCATTTCCGGACTCGIGGCGAAACGAACIGCTTCAIGCTGGGGTA 780 	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	541 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600 	481 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	361 GATTICTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420 	301 CCTTGGGCGCGACAACAGTGAGTGGTTGCCATTGGCACTTGGACACCATTTGCATG 360	241 GTTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300 	181 GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180	61 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120	5809 ATGTCAGCTTCACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAA

유 성

음 성 음 성

음 성 음 성 음

```
1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7009
                2160
                                                                                                                                                                                                                                                                                    1980
                                                                                                                                                                                                                                                                                                                                                                               1920
                                                                                                                                                                                                                                                                                                                                                                                                                        7668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACACTCCTCCTGGTGGT-AA
CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                           GGATTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                 ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                            CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAAGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGAAGGAAAAAGACAAAAATAAAGATAAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAAGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGCCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGGAGACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTTCGGGAGG
                                                                                   TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                    GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                             ACATGATTGGCTTACAGACGAGAATGCCGGGGGGGGGGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                     CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                        GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                    2219
                                                                                                                                                                                                                                                                                                                                                                                 1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1259
                                                                                                          2159
                                                                                                                                                                                                2099
                                                                                                                                                                                                                                             7847
                                                                                                                                                                                                                                                                                         2039
                                                                                                                                                                                                                                                                                                                                     7787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1200
                                                              7967
                                                                                                                                                    7907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1739
```

5 8 5 8 5

Ś

밁

ð B

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
REMARK
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
AF242881
LOCUS
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                 JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2220
96236046
8655509
8 (bases
                                                                                                                                                                                                                                                                                                                    Mol. Plan
92190631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumefaciens octopine Ti plasmid pTi15955
Plant Mol. Biol. 2, 335-350 (1983)
Original sequence presented in GenBank Accession Number X00493
2 (bases 166443 to 168193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF242881 AF034854 AF034855 AF035413 AF035773 AF039887 AF039888
AF117204 AH006976 M14480 M14762 M80605 M80607 U19620 U43674 U43675
U48718 U60011 X04784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF242881 194:
Agrobacterium tumefaciens
sequence.
                                                                                  Kim, K.S. and Farrand, S.K.

Ti plasmid-encoded genes responsible for catabolism of the crown gall opine mannopine by Agrobacterium tumefaciens are homologs of the T-region genes responsible for synthesis of this opine by the
                                                                                                                                                                                                                                  Valdivia,R.H., Wang,L. and Winans,S.C. Characterization of a putative periplasmic octopine accumulation encoded by Agrobacter
                                                                                                                                                                                                                                                                                                                                                 Habeeb,L.F., Wang,L. and Winans,S.C.
Transcription of the octopine catabolism operon of the Agrobacterium tumor-inducing plasmid pTiA6 is activated LysR-type regulatory protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic Acids Res. 15
87146396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 (bases 175278 to 177719)
Winans, S.C., Allenza, P., St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yanofsky, M.F. and Nester, E.W. Molecular characterization of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barker,R.F., Idler,K.B., Thompson,D.V. and Kemp,J. Nucleotide sequence of the T-DNA region from the I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Agrobacterium tumefaciens (Rhizobium Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   site-specific endonuclease
Cell 47 (3), 471-477 (1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and Nester, E.W.
The virD operon of Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yanofsky, M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Agrobacterium tumefaciens
J. Bacteriol. 168 (1), 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rhizobiaceae; Rhizobium/Agrobacterium g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AF242881.1 GI:8572673
                                                                                                                                                                                                                  plasmid pTiA6
                                                                                                                                                                                                                                                                                                                                                                                                                                     3547330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3021341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3759904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Proteobacteria; Alphaproteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                   (bases 68024 to
                                                   Bacteriol.
                                                                                                                                                                                                                                                                                   (bases 50125 to 54471)
                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 50125 to 54471)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 168089 to 173951)
lofsky,M.F., Porter,S.G.,
   (bases 39167
                                                                                T-region genes
                                                                                                                                                                                                                                                                                                                                   Plant Microbe Interact. 4 (4),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Allenza, P., Stachel, tion of the virE oper
                                                                                                                                                                                                     173
     ő
                                                                                                                                                                                                   (20),
                                                     (11),
     45466
                                                                                                                                                     76460)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244-250
                                                     3275-3284 (1996)
                                                                                                                                                                                                     6398-6405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140 bp DNA
octopine-type Ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825-837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Young, C., Albright, L.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    operon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    host-range-determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,S.E., McBride,K.E. and Nester,E.W. ron of the Agrobacterium Ti plasmid
                                                                                                                                                                                                                                   Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumefaciens
                                                                                                                                                                                                                                                                                                                                       379-385 (1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      radiobacter)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  circular plasmid,
                                                                                                                                                                                                                                     transport system
rium tumefaciens '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rhizobiales,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.D.
Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BCT 26-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gordon, M.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        locus
                                                                                                                                                                                                                                                                                                                                                                      γď
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                18 (bases 186239 to 193239)
Zhu,J. and Winans,S.C.
Direct Submission
Submitted (17-NOV-1997) Section of Microbiology,
University, Wing Hall, Ithaca, NY 14853, USA
19 (bases 76455 to 98723)
Winans,S.C. and Lyi,S.
                                                                                                                                                                                                                                Kim, K.-S., Sackett, R.L. Direct Submission Submitted (04-JUN-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mol. Mic: 99141607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 (bases 133963 to 138972)
Kalogeraki V.S. and Winans, S.C.
Wound-released chemical signals may elicit multiple responses from which wound-released chemical signals may elicit multiple responses from the signal was also be a signal which we would be a signal which would be a signal which will be a signal will be a s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 (bases 54312 to 62806)
Oger. P., Kim, K.S., Sackett, R.L., Piper, K.R. and Farrand, Octopine-type Ti plasmids code for a mannopine-inducible dominant-negative allele of traR, the quorum-sensing act regulates Ti plasmid conjugal transfer microbiol. 27 (2), 277-288 (1998)
                                                                                                                                                                                                                                                                                                                                                                  Submitted (07-FEB-1996) Clay
                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Winans, S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (10-JAN-1995) Kun-Soo Kim, I
Tllinois at Urbana-Champaign, 1201 W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kim, K.-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Octopine-type 
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Winans, S.C., Farrand, S.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lyi,S.M., Jafri,S. and Winans,S.C.
Mannopinic acid and agropinic acid catabolism octopine-type Ti plasmid pTi15955
Mol. Microbiol. 31 (1), 339-347 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plasmid
J. Bacteriol. 180
99009000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The conjugal transfer system of Agrobacterium tumefaciens octopine-type Ti plasmids is closely related to the transfer system of an IncP plasmid and distantly related to Ti plasmid vir genes of an acceriol. 178 (14), 4248-4257 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 (bases 2285
Alt-Morbe, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        880977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fuqua, C. and Localization
                                                                                                                                                                                                                                                                                                             715 Stadium Dr., San Antonio,
17 (bases 54312 to 62806)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9987134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9791116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Winans, S.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PTIR10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                express two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15 (bases 96353 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 (bases 68024 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 (bases 1 to 194140)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12 (bases 76455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8763954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96405643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Microbiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Winans, S.C.
tion of OccR-activated
two ABC-type permeases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22855 to 39243; 90
,J., Stryker,J.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhu,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ti plasmid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ť
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (21),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111409)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (6), 1199-1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oger, P.M.,
                                                                                                                                                                                                                                  Crop
                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5660-5667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96353 to 111409)
                                                                                                                                                                                                                                                                                          Farrand, S.K.
                                                                                                                                                                                                        Sciences, University of Illinois at 1201 W. Gregory Dr., Urbana, IL 61801,
                                                                                                                                                                                                                                                                                                                                     Fuqua, Biology,
TX 78212, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and TraR-activated and the traR gene of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schrammeijer, B., Hooykaas, P.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Microbiology,
1. Gregory Dr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Li, P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Microbiology,
                                                                                                                                                                                                                                                                                                                                                                  Trinity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Farrand, S.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d promoters that of Ti plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             University
Urbana, IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     that
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                       Ş
                                                             문
                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
4962
                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hall, Ithaca, NY 14853, USA
On or before Jun 20, 2000 this sequence version replaced gi:3377769, gi:1215729, gi:1381799, gi:797330, gi:2665704, gi:2749889, gi:538260, gi:2773254, gi:2773255, gi:7773256, gi:154820, gi:154827, gi:2662524, gi:39122, gi:2687604, gi:gi:154773, gi:6689862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (18-AUG-1999) Section University, Wing Hall, Ithaca, N 25 (bases 1 to 194140) Schu, J., Oger, P.M., Schrammeijer, Nicolary (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24 (bases 110822 to Zhu, J. and Winans, S. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (03-AUG-1998) Microbiology, Hall, Ithaca, NY 14853, USA 23 (bases 62801 to 66985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (25-NOV-1997) Section of Microbiology, University, Wing Hall, Ithaca, NY 14853, USA 21 (Dases 13393 to 138972; 176911 to 186244) Styker,J.L., Mantis,N.J., Kalogeraki,V.S. and Wi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission Submitted (07-MAR-2000) Microbiology,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (29-DEC-1998)
Urbana-Champaign, 361 EF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oger, P.M.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hall, Ithaca, NY 14853, USA
20 (bases 170209 to 175283)
Zhu,J. and Winans,S.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Winans, S.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NY 14853, USA
22 (bases 228)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission Submitted (23-DEC-1997) Microbiology,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (20-NOV-1997) Microbiology, Hall, Ithaca, NY 14853, USA
                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Winans,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                              CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                   (bases 22855 to 39243)
                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        /note="extrachromosomal
octopine-type"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Agrobacterium
/mol_type="genomic DNA"
/db_xref="taxon:358"
                                                                                                                                                                                                                       /insertion_seq="ybe"
/note="similar to IS66"
                                                                                                                                                                                                                                                                                                                                        organism="Agrobacterium"
/mol_type="genomic DNA"
/db_xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /plasmid="Ti"
                                                                                                                                                                                            organism≃"Agrobacterium tumefaciens"
                                                                                                                                                                                                                                                             db_xref="taxon:358"
                                                                                                                                                                                                                                                                         organism="Agrobacterium"
(mol_type="genomic_DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            location/Qualifiers
                                                                                                                                                                                                                                                                                                                          nsertion_seq="ybd"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .194140
                                                                                                                                           98.4%;
99.5%;
                                                                                                                                                                                                            .14666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schrammeijer, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133968)
..C.
                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ERML,
                                                                                                                                             Score 2230.6;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) Section of Microbiology,
Ithaca, NY 14853, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crop Sciences, University of Illinois at RML, 1201, W. Gregory Dr., Urbana, IL 618
                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                           tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hooykaas, P.J.,
                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cornell University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cornell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cornell University,
                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Winans, S
                                                                                                                             Indels
                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cornel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Farrand, S.K.
                                                                                                                             <u>۷</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gi:154767,
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ithaca,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61801,
                            120
5021
                                                              4961
                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
```

용 성	문 &	g Q	당 왕	g Q	B &	B 8	g &	B 8	g Q	B 8	B Q	g &	8 8	B 8	A A	B & 8	B 8
1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1200 	1081 GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA 1140	1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCCTTGAAGGAC 1080 	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG 1020 	901 TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960	841 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 900	781 GACGATGTTACAATATGTGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840 	721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660 	541 CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	481 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 480	361 GATTTCTCCGAAGCAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420 	301 CCTTGGGCGGGGCAACAGTGAGTGGTCTCGTTGGCCATCGACTTGGACACCATTTGCATG 360	GITCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 3	181 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 2	121 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
₽ \$	S B 7	S B 8	) B &	2 B 4	Q B 4	S B &	}	Q B 4	S & &	2 B 4	S B 8	}	B &	p &	} B &	g Qy	Db Oy
121 TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCACTAGAAATTAG 716	- 0		GGATTTTTATTCIGAGGACTTTTCTTTCAAGCACTGGATGGATGGATGGTTATTCAAGA		980	OCCGGTTTTTTCAGACAAAAAAAGAGCGATTATTTCTTGCTTG	701		1740 TGTCGTCATGGACGGGATCGCAAAAGCACTGTATTGCCTGGACTATGAGTCGCAGGATCC	TACCAATATITITICAGGCACCAGTGAACCAAGGGTTGATAACAGCCATATGACAGGATTGACAGGATTGACAGGATTTTTCAGGCACCAGTGAACAGCGATTGATT	TACCABTATTTTCAGGCACCAGTGABACCABAGTGATABACAGCCATATGACAGGAT	1500 TCAGARGGARAGACARAMATIANAGATIRAGGCTTAAGAGGCGGATATCTGAACTTTATGA			GTTTGGTCCAGTTTTGAAAGCGGGTTTATTGAGATCCTCGGTCATCAACGGAT 		1201 GAGTCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 

```
BASE CO
                                 В
                                                                  S
                                                                                                     밁
                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SEGMENT
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
TIPMS2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                        Query Match
Best Local Similarity
Matches 2255; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                              COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasmids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klee, H., Montoya, A., Horodyski, F., Lichtenstein, C., Garfinkel Fuller, S., Flores, C., Peschon, J., Nester, E. and Gordon, M. Nucleotide sequence of the tms genes of the pTiA6NC octopine plasmid: two gene products involved in plant tumorigenesis Proc. Natl. Acad. Sci. U.S.A. 81 (6), 1728-1732 (1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Original source text: Plasmid Ti (clone: pTiA6NC.). The tms1 protein has a region which showed significant homology to the adenine binding regione of p-hydroxybenzoate hydroxylase from P. fluorescens. It seems that the tms1 protein binds adenine eitner as substrate or cofactor. The initiation and termination sites of transcription have not yet been identified [1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIPMS2
Ti plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lasmid
lasmid
                                                        CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
     CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                       얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2591)
                                                                                                                                                                                                                                           654 a
ut 250
                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      걸다
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Plasmid Ti"
/mol type="genomic DNA"
/specific_host="octopine"
/db_xxef="taxon:2512"
/clone="pTiA6NC:"
                                                                                                                                                                                                                                                                       DQCSDSGRIGFPPEDVPKPKVAVIGAGISGLVVANELLHÄGVDDVTIYEASDRVGKL
WSHAFRDAPSVVAEMGAMRFPPAAFCLFFFLERYGLSSMRPFPBYDGTVDTYLLVYGVQ
YMWKAGQLPPKLFHRVYNGWRAFLKDGFYED IVLAS PVAITQALKSGDIRWAHDSWQ
IMUNRFCRESESGGIER, FLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVEESGFI
EILRLVINGYEENQRMCPEGISELPRRIASEVVNGVSVSQRICHVQVRAIQKEKTKIK
IRLKSGISELVDKVVVTSGLANIQLRHCLTCDTNIFQAPVNQAVUNSHMTGSSKLFLM
TERKFWLDHILPSCVLMDGIANIQLRHCLTCDTNIFQAPVNQAVUNSHMTGSSKLFLM
TERKFWLDHILPSCVLMDGIANIQLRHCLTCDTNIFQAPVNQAVUNSHMTGSSKLFLM
TERKFWLDHILPSCVLMDGIANIYCHFPACADYDQNVIQHWULTDENAGGAFKLNRRGEDF
YSEELFFQALDTANDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKGN
PLEHSWRRYNYKTRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                             / translation="MGASPLIDNQCDHLPTKWVDLTWVDKADELDRRVSDAFLERBAS
RGRRITQISTECSAGLACKRIADGRFPEISAGGKVAVLSAYIYIGKBILGRILESKFW
ARATVGGLVALDLAPFCMDFSEAQLIQALFILSGKRCAFIDLSHFVAIGISKTAGFT
LPMFLYENGTMKCVTGFTITLEGAVFFDMVAYGRNLMLKGSAGSFPTIDLLYDYRPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/transl_table=11
/protein_id="AAA92550.1"
/db_xxef="GI:154750"
                                                                                                                                                                                                                                           ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /plasmid="Plasmid Ti"
160. .2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene="tms1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="tms1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . .2591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Â.
                                                                                                                                                                                        98.1%;
99.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumefaciens
                                                                                                                                                                                                                                         segment
                                                                                                                                                                        Score 2225.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                          0,
                                                                                                                                                                                                                                                         656 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        octopine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain)
                                                                                                                                                                                                          ВB
                                                                                                                                                                        12;
                                                                                                                                                                                                          ۲.
                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tms1 gene, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Garfinkel, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BCT 19-MAR-1996
                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Į.
                                      279
                                                                        120
                                                                                                     219
                     S
                                                    밁
                                                                                  Ş
                                                                                                                                                S
                                                                                                                                                                                        밁
                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                     1201
                                                                                                                                                                                                                                                           1120
                                                                                                                                                                                                                                                                                                                            1060
                                                                                                                                                                                                                                                                                                                                                                                             1000
                                                                                                                                                                                                                                                                                           961
                                                                                                                                                                                                                                                                                                                                                                                                                                                              940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
GAGTCCTTCTCAGGGATAGAGAGAGCATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                        TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                            GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA 1140
                                                                                                                                                                                                                                                                             CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                       GGTTTCTATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                           CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                           CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAAGCCGGG
                                                                                                                                                                                                                                                                                                                              TTCTGCTTGTTTTTCCTCCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                              TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                             TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 1059
                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACGATGTTACAATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTGAAGGGCCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGCACCATTTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                     1259
                                                                                                                                                                                                                                                                                           1020
                                                      1359
                                                                                                                                                                                        1239
                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                           1179
                                                                                                                                                                                                                                                                                                                            1119
                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      339
```

ear BCT 18-DEC-2001 section 5 of 20 of

```
RESULT 7
AE007927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                 ઈ
                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                           밁
                                                                                                                          ર્
                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1360
                                                                                                                                                                                    2319
                                                                                                                                                                                                                                                                                                                             2100
                                                                                                                                                                                                                                                                                                                                                                                                                    2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2019
                                                                                                                                                                                                            CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                        TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                   GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCGCTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAAGGAAAAAGACAAAAATAAAGATAAGGCTTAAGAGCCGGGATATCTGAACTTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAAGTGGTTAACGGTGTGTCTGTGAGCCCAGCGCATATGCCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAGAAATCAGCGGATGTGCCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAAGAAATCAGCGGATGTGCCCTGAAGGAATTCTCAGAACTTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTGAA 1419
                                                                                                                                                                                                                                                                                                                                                                           GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC
                                                                                                                                           TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG 2268
                                                                                             2427
                                                                                                                                                                                                                                  2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1319
                                                                                                                                                                                                                                                                                                                             2159
                                                                                                                                                                                                                                                                                                                                                                           2258
                                                                                                                                                                                                                                                                                                                                                                                                                      2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1439
                                                                                                                                                                                                                                                                               2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                            gene
                                                                                                                                                                 SdD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 9931)
Hinkle,G., Slater,S.C. and Goodner,B.
Complete Genome Sequence of Agrobacterium tumefaciens C58
(Rhizobium radiobacter C58), the Causative Agent of Crown
Disease in Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cambridge, MA 02139, USA
On Oct 19, 2001 this sequence version
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 (bases 1 to 9931)
Hinkle,G., Slater,S.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Agrobacterium tumefaciens str. C58 (Cereon)
Agrobacterium tumefaciens str. C58 (Cereon)
Bacteria, Proteobacteria, Alphaproteobacteria,
Rhizobiaceae; Rhizobium/Agrobacterium group; Ag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Agrobacterium tumefaciens str.
the complete sequence.
AE007927 AE007871
AE007927.2 GI:16271969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (14-AUG-2001) Cereon Genomics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AE007927
                                                                                                                                                                                                                                              /codon start=1
/codon start=1
/transI_table=11
/transI_table=11
/product="AGR_pTi_48p"
/pro
/codon start=1
/transT_table=11
/product="AGR_pTi_49p"
/protein id="AAK90969.1"
/db_xref="GI:15163473"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /transT_table=11
/product="AGR_pTi_bx83p"
/product="AGR_pTi_bx83p"
/protein_id="AAK9967.1"
/db_xref="GI:15163471"
/db_xref="GI:15163471"
/translation="MYMSRPIENIIDSSNIQDRRELKLVLRHTEIAYRSFAQEDLIPA
/kranslation="MYMSRPIENIIDSSNIQDRRELKLVLRHTEIAYRSFAQEDLIPA
/kranslation="MYMSRPIENIDEVKRFCEVACLPGPAGIPLNIILNDSLTYVYCSFQAM
RKYAHKRFYDGYSDGGYVISTVDPYABGITKETMRSWHNNVCONTSNETHDLDAYIAF
RYYSLQNPSFSHMKIGCDSFLAPSRVDPFCVEIIAVGKALFHDNGLKKNPRCGGQWLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="AGR_pTi_48" complement(1410. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (1410.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic
/strain="C58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Agrobacterium /mol_type="genomic DNA"
                                                                                                                                                                                                                                    AALEKAINFPSFPDAFN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (1410. .2813)
/gene="AGR_pTi_48"
/note="(AJZ37588) IAH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="putative indole-3-lactate synthase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /plasmid="Ti"
                                                                                                                                                                   /gene="AGR_pTi_49"
3151. .5418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'gene="AGR_pTi_bx83"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'gene="AGR_pTi_bx83"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       db_xref="taxon:181661"
                                                                                                              gene="AGR_pTi_49"
note="(AF126446)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . . 9931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .2813)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goodner
                                                                                                                 tryptophan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA linear
plasmid Ti, sec
                                                                                                                   monooxygenase'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>4</u>5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sidney Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Agrobacterium.
```

str.

(Cereon) "

gi:15163470

4171 CAGCAGCCGAAGCTGTTCCATCGCGTTACAGCCGTTGGCGTTCTTGAAGGAC 4230  1081 GGTTTTCATGAGCGAGATATTGTGTTGGCTTGGCCTGTCGCTATTACTCAGGCCTTGAAA 1140	Db Qy AAT 60	milarity 94 Conservative INGTCAGCTTCACCTI INGTCAGCTTCAGCTT TGACAATGGTCGATI INGTCAGTTCTAGCTI TGACAATGGTCGATI TGACAATGGTCGATI TGACAATGGTCGATI GAGAAGCTTCTAGGG	Matches 2141;  Matches 2141;  Qy 1 1   Db 3151 A  Qy 61 C  Qy 62 C  Qy 121 C
841 TICANGGACCICCTAGISTICGICGICGICGICGICGICGICGICGICGICGICGICGI	Db Db Oy PPWLMDA GFYARGG Db Oy Oy	7	BASE COUNT ORIGIN
		/db_xref="GI:15163475" /translation="MTRQGMLVPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD /translation="MTRQGMLVPCLSHGKDDQLQDELSELSKAYRKKFQTDLHTKSGD IIDpSGEFLYVYLDEENYRICRQSMVLVSNAPDGLIATTLEPYSDSYTFRQVRRQLQA FSGDGGRINYSRNEHSSSYFLTIQASNEFKHVGAVRNTFGQSKDIWKRRMPDASQPLD YHLIANGCSAFLPEAALDDVESDGAV" complement (83979020) /gene="AGR_pTi_bx99" /gene="AGR_pTi_bx99" /gene="AGR_pTi_bx99"	gene CDS
541 CTIGAAGGGCCGIGCCAITTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGGT 600	ATHGIAQE QY Db Db QY QY Odd Odd Odd Odd Odd Odd Odd Odd Odd Od	IQELVDLWKEPRLRPILKEIDGYRYAMLFASQNQITSDMLLQLDADMEDKI YLIHARQEQKEPRVNAAAYDGFEGHPFGNY" 7354. 7914 /gene="AGR_DTi_51" 7354. 7914 /gene="AGR_DTi_51" /gene="AGR_DTi_51" /note="Probable 6a gene" /codon_start=1 /transf_table=11 /product="AGR_DTi_51p" /protein_id="AAR90971.1"	gene
361 GAITTCTCCGAAGCACAACTAATCCCAAGCCCTTTTTGCTGAGCGGTAAAAGATGCGA 420	Db ACLISI PAACISI Db PAACISI Db PAACISI Db	/gene="AGR_DTi_50" 60896838 /gene="AGR_DTi_50" /note="probable tmr gene" /codon start=1 /transI_table=11 /product="AGR_DTi_50p" /protein_id="AAR90970.1" /db_xref="GI:15163474" /translation="MYSRYRKKIMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRV /translation="MYSRYRKTMDLRRT" /translation="MYSRYRKTMDLRRT" /translation="MYSRYRKTMDLRRT" /translation="MYSRYRKTMDLRRT" /translation="MYSRYRKTMDLRT" /translation="MYSRYRKTMDLRT" /translation="MYSRYRKTMDLRT" /translation=	CDS
		On="N ECSAC IDLAF FFPEI VVAEN VVAEN KLFHF FSSAI	gene

524 215 530	
gene CDS	CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCCTGATTACGACCAAAATGTTATTCA
Saenphin Karp, P., Krespan, Zhao, Z., and Nest TITLE Direct S. JOURNAL Submitte Washingt 98195-72 FEATURES SOURCE	4830 GTCANANCTCTTCCTGACTGACCGANAGTTTTTTTTTTTT
Karp, P. Krespan, Zhao, Z., Zhao, Z., And Nester TITLE The genc Tumefaci JOURNAL Science MEDLINE 21608550 PUBMED 11743199 REFERENCE 2 (base AUTHORS Chen, Y., Gillet, McClella	1500 TCAGAAGGAAAAAAAAAAAAAAAAAAAAAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1559
LOCUS DEFINITION AGNOBACE CHECONE ACCESSION AE009419	4351 GAGTCCTTCTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTAA 4410 1260 ACATGGAGTTTTCCTCAGTGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319

RESULT 8 AE009419

```
d(bases 1 to 10377)
d(bases 1 to 10377)
d(D.W., Setubal, J.C., Kaul, R., Monks, D., Chen, L., Wood, G.E., an, Y., Woo, L., Kitajima, J.P., Okura, V.K., Almeida Jr., N.F., an, Y., Bovee Sr., D., Chapman, P., Clendenning, J., Deatherage, G., Elet, W., Grant, C., Guenthner, D., Kutyavin, T., Levy, R., Li, M., Clelland, E., Palmieri, A., Raymond, C., Mons, G., Levy, R., Li, M., Eisen, J.A., Paulsen, I., anphimmachak, C., Wu, Z., Gordon, D., Eisen, J.A., Paulsen, I., rp, P., Romero, P., Zhang, S., Yoo, H., Tao, Y., Biddle, P., Jung, M., perry, M., Gordon-Kamm, B., Liao, L., Kim, S., Hendrick, C., so, S., Dolan, M., Tingey, S.V., Tomb, J., Gordon, M.P., Olson, M.V. I Nester, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gton, 1959
7242, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ses 1 to 10377)

New, Setubal,J.C., Kaul,R., Monks,D., Chen,L., Wood,G.E.,
Woo,L., Kitajima,J.P., Okura,V.K., Almeida Jr.,N.F.,
Woo,L., Kitajima,J.P., Clendenning,J., Deatherage,G.,
Bovee Sr.,D., Chapman,P., Clendenning,J., Deatherage,G.,
W., Grant,C., Guenthner,D., Kutyavin,T., Levy,R., Li,M.,
Iand,E., Palmieri,A., Raymond,C., Rouse,G.,
immachak,C., Wu,Z., Gordon,D., Eisen,J.A., Paulsen,I.,
merco,P., Zhang,S., Yoo,H., Tao,Y., Biddle,P., Jung,M.,
n,W., Perry,M., Gordon-Kamm,B., Liao,L., Kim,S., Hendrick,C.,
Dolan,M., Tingey,S.V., Tomb,J., Gordon,M.P., Olson,M.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cterium tumefaciens str. C58 (U. Washington)
cterium tumefaciens str. C58 (U. Washington)
ia; Proteobacteria; Alphaproteobacteria; Rhizobiales;
iaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cterium tumefaciens str.
mplete sequence.
19 AE008690
19.1 GI:17744019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ed (27-SEP-2001) Department of Microbiology, University of ton, 1959 NE Pacific Ave, Box 357242, Seattle, WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ster, E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ciens C58
294 (5550), 2317-2323 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submission
                                                                                                                                                                                               /note="synonym: Atu6007" complement (380. .1414)
                                                                                                                                                                                                                                                                                                                           /translation="mdlylifgftctgktaaaitlsehtgipvlaldriqccpqlstg
sgrpmaaeytapqslcqxxc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Agrobacterium
Washington)"
                                                                                                                                                                                                                                                                                          complement (380. .1414)
                                                                                                                                                                                                                                                                                                                                                                                        /product="isopentyladenosine phosphotransferase"
/protein_id="AAL46242.1"
/db_xref="GI:17744020"
/codon_start=1
/transī_table=11
/product="agrocinopine_synthesis_reductase"
                                                                                                 /note="identified by sequence similarity; putative; ORF located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="identified by sequence similarity; putative; ORF
located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="synonym: Atu6006"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'plasmid="Ti"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:180835"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="C58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .10377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10377 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p DNA linear BCT 20-DEC-2001
C58 Ti plasmid, section 2 of 21 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumefaciens str. C58 (U.
```

```
/codon_start=1
/trans[_table=11
/trans[_table=11
/trans[_table=11
/product="ndole acetamide hydrolase"
/protein_id="AAL46246.1"
/protein_id="AAL46246.1"
/db_xref="GI:17744024"
/translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCQAAKPLNALLAT
/translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCQAAKPLNALLAT
DWDGLERSAKKIDRHGNAGLGLCGIPLCFKANIATGIFPTSAATPALINHLPKIFSRV
AERLFSAGALDGASGNMHELSFGITSNNYATGAVRNPWNFSLIFGGSSGGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRFTLAVRYRYRRDFIIFVSFTRDTAGIIAQCVADV
IILDQVISGRSAKISPMPLKGLRIGLFTTYFYDDLDADVAFAAFTIRLLANGSTRAVASR
LMLGGIGTDTGASVRLPALCGVVGFRFTLAVLTSFSDVIKGIRSPDVANIVSA
QIDGHGISNDEYELARGSFRPRLGATYRNYFRLYQLDALIFPTAPLAAKAIGQESSVI
QUDGHGISNDEYELARGSFRPRLGATYRNYFRLYQLDALIFPTAPLAAKAIGQESSVI
QUDGHGISNDEYELARGSFRPRLGATYRNYFRLYQLDALIFPTAPLAAKAIGQESSVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
/trans[_table=11
/trans[_table=11
/product="ggrocinopine_synthase"
/protein_id="AAL46244.1"
/protein_id="AAL46244.1"
/db xref="01:17744022"
/trans[ation="MEGTVWPAWTLHWDLPENVTPPEVLARHSVPRLLERLEEDLPLQ
VIEHRCMFNLGKRIQECTASSLLAALGQGGRNLSELDVCLTSDNVAIVSBDLNTWRVS
EKLGDKLFNEIHSSKIKDVPVIIREVSNGIIQDKYLFTEDHIPLLTEIFSKVFLANSD
ATIFLDGRNYBAHVIVAMLSHRPEYHQRVVVLFYTESVPHGAFVDAVLNAQPASAWR
KSIALWPALFPEELCRLARLRQVTEPTVDLYLLAGKAWFDSMLMQDMRIVAAHVVFSG
VTRNLLGQVUDKDVLLAFDSDQAAVRLAYYLKEDTMIRAKRPHLKFAAVTRCYDFAAL
LDSGERGEFSIDIKTGRARRHETDERKHIRWRKGTPGNSATIADWVISDRPEDEMAIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /transl tat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MNSIINTDVPIDPAIDEVVKRFCEVACLPGPAGIPLNIILNDSL
TYVYCSFQANKKYAHKRFYDGVSDEGVVISTVPPYABGITKEMRSWHNNVCQNTSNE
THDLDAYIAFLPTSLQNPSFSHMKIGCDSFLAPSRVDPFCVEIIAVGKALFHDNGLKK
NPRCGGQWLPPSC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           / translation="MHEGGLGRKMFVENYPDCEKTELFSARVAGALTHARRSNILFV
SHGGVLSVVATLLGVELTAMQRCNACVLHFKFDGSSWINYHTRDSGVILVTAGASGGIDK
AIDDNLMRRGFRLSLGARS VEKLEATTGFQNESLHFARFEAEDLOTMEEWVSTAMLF
GRIDGLVNNAGDGTRVALAEGIDYEQLERQWKLIVAGAPLRMIMLCLPOLAKSGSGRRIV
NILSMGGRVLNSFVGYNMTKHALSGLTKTAQHVGWESGVRTMEICPGYVATKMSAWT
                                                                                                           6403. .8670
/gene="tms1"
/note="identified by sequence similarity; putative;
/note="identified by sequence similarity; putative;
located using Blastx/Glimmer"
                                                                                                                                                                                                                       AALEKAINFPSFPDAFN"
                                                                                                                                                                                                                                               HNGSMMNTFKIYVRNVDPSSNAGLPGLSLPACLTPDRLPVGMEIDGLAGSDHRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (4662. .6065)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (4662. .6065)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="gene 5 protein"
/protein_id="AAL46245.1"
/db_xref="GI:17744023"
                                                                                                                                /gene="tms1"
/note="synonym: Atu6011"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="tms2"
/note="synonym: Atu6010"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="gene5"
/note="identified by sequence
/note="identified by sequence
located using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3636.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3636.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="synonym: Atu6008"
complement(1622. .2878)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (1622. .2878)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPRPGCQCAH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DETEDDGKTQPEHTAELVRQATERPNNAFVPKTEVLCTQQPLAVRSRSKVGGSTVYGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="identified by sequence similarity; putative; ocated using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="tms2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="synonym: Atu6009"
3636. .4157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'gene="gene5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="identified by sequence similarity; putative; ORF
ocated using Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="acsx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="acsx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAL46243.1"
/db_xref="GI:17744021"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      similarity; putative;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORF
                                               ORF
                                                                                                  뫄
                                                                                                                                                     Ś
                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE
```

CDS

gene

CDS

gene

SgS

gene

gene

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 2141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGS
                                                                                                                                                                              6703
                                                                                                                                                                                                                                                                               6643
                                                                                                                                                                                                                                                                                                                                                                           6583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6403
                                 421
                                                                                                                               361
                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                       GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240
                                                                               GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                        GTTCTCCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCCGGATACTTGAATCGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGGATGCCTTCTCAGAA 6522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTCAGCTTCAGCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAAATGGTGGAT 6462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA 420
                                                                                                                                                                              CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                            CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360
                                                                                                                                                                                                                                                                               GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                           GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /translation="MDLRLIFGPTCTGKTSTAVALAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVBELKGTSRLYLDDRPLVKGIIAKQAHERLMGEVYNYEAHGGLILEGGSISL
LKCMAQSSYMSADPRMHIIRHELADEETFMNVAKARVKQMLRPAAGLSIQELVDLWK
EPRLRPILKEIDGYRYAMLFASQNQITSDMLLQLDADMEDKLIHGIAQEYLIHARRQE
QKFPRVNAAAYDGFEGHPFGMY"
2376 c 2438 g 2818 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="int"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARARVSĞİVAIDLAPFCMDFSBAQLLQTLFILLSGKRCASSDLSHFVAISİSKTARSRT
LQMPPYEKGTTKRVTGFTLTLEBAVPFDMVAYCRRLMLKASGSPTTIDLLYDYRSFF
DQCSDSGRIGFPFDEDVEKKVAIĞAĞISĞLYVAŞELLHAGVUDUTIYEASBRYGKK,
WSHAFKDAPSVVAEMGAMRFPPAASCLFFFLERYĞLSSMRPFPNPGTVDTNLVYQĞLR
YMWKAĞQQPPKLFHRVYSĞMRAFLKDGFHBĞDIYLASFVAITOALKSĞDIRRAHDSWQ
TYLLNRFGRESFSSAIRBIFLGTHPFGGGTWFSFFPHDWDLFKLMGIĞSĞĞGFFQVERSĞFI
EILRLVINGYEBENQRMCSEĞISELPRRIATQVVNGVSVSQRIRHVQVRAIEKEKTKIK
IRLKSĞISELYDKTVVTSĞLANIQLRHCTTCDTTIFRAPVNQAVDNSHMTĞSSKLFLL
TERKFMLDHILDSCYLMDĞIAKAVYCLDYEPQDPNĞKCLLVLİSYTMBDDSKKLLAVPÜ
KKERFILDHILDSCYLMDĞIAKAVYCLDYEPQDDPNĞKCLLVLİSYTMBDDSKKLLAVPÜ
KKERFCLLRDAISRSFPAFAQHLVPACADYDQNVVQHDMLTDENAĞĞAFKLNRRĞEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MSASALLDNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
RGRRITQISGECSAGLACKRLADGRFPEISAGEKVAALSAYIYVGKEILGRILESEPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="tryptophan 2-monooxygenase"
/protein_id="AAL46247.1"
/db_xref="GI:17744025"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="isopentenyl transferase"
/protein_id="AAL46248.1"
/db_xref="GI:17744026"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9368.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLEHSWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YSEELFFQALDMTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="synonym:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocated using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 2044;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fied by sequence similarity; putative; ORF
Blastx/Glimmer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Atu6012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 10377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>۲</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                              480
                                                                                                                                                                                                                                                                            6702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                               6822
                                                                                                                                                                              6762
                                                                                                                                                                                                                                                                                                                                                                           6642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
```

JOURNAL	1500 TCAGAAGGAAAAGACAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA 1559 
MEDLINE PUBMED REFERENCE AUTHORS	1440 TGAAGTGGTTAACGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT 1499 
AUTHORS TITLE JOURNAL	1380 TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC 1439 
ORGANISM	1320 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA 1379 
ACCESSION VERSION KEYWORDS SOURCE	1260 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319 
RESULT 9 AB016260 LOCUS DEFINITION	1201 GAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 1259 
	1141 TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG 1200
Оу 22	1081 GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA 1140
Db 85	1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTCGCGTGCGT
Db 84 Qy 21	
N (	_
Db 83	901 TTCTGCTTGTTTTTCTTCGTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960
<u>.</u>	841 TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA 900
OV 19	781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAAGCCAAGCTTTGGTCACATGCT 840
Db 82 Qy 18	721 GTCATTGGCGCTTGGCATTCCGGACTCGTGGTGGCAACCGACTGCTTCATGCTGGGGTA 780
рь 81 Qy 18	63 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGGCG 7
Фу 17	003 TOURSTRANDITON THE TOURS TO STATE TO THE TOURS TO THE
Db 80	1 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 6
00 da 80	6943 CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT 7002
ОУ 16	83 CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
7	481 CTGCCAATGCCGCTGTACGAAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC 540
0v 15	6823 TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGGCTCCCGAACC 6882

1560 PARCETTSCHETCHARTCTCHARTCTCAACTANTATCCAACTATTCCACCTCTCACCACCTTCTCACACTCCACCTCTCACCAC	ESULT 9 BO16260 COCUS EFINITION CCESSION ERRICH ERRICH ERRICH AUTHORS TITLE JOURNAL MEDLINE PUBMED EFERENCE AUTHORS TITLE AUTHORS TITLE JOURNAL		•
STRIGTTACATCTGGACTGCCAAATTATCCAACTCAGGCATTGCCTGACATGGGA 161 STRIGTTACAGCACTGGACTGGACAAATTATCCAACTCAGGCATTGCTGACATGGGA 161 ATTTTCAGGCACCAGTGAACCAAGGGGTTGATAACACCAATTTCACAGGATTC 167 ATTTTTCAGGCACCAATGAACCAAGGGGTTGATAACACCATATGACAGGATTC 167 ATTTTCAGGCACCAATGAACCAAGGGGTTGATAACACCATATGACAGACTTTTCA CCTCTTCTGATGACCAAAACCAGTTATACTGCGTTAGAACCATATCCTCCCTC			ע ע
	206479 bp DNA circular BCT 12-JUN-200 AB007145 AB007188 AB006857 AB006858 .1 GI:6498173 .1 GI:6498173 .2 rium tumefaciens (Rhizobium radiobacter) 3 rium tumefaciens (Rhizobium radiobacter) 4 rium tumefaciens (Rhizobium radiobacter) 5 rium tumefaciens (Rhizobium radiobacteria; Rhizobiales; Proteobacteria; Alphaproteobacteria; Rhizobiales; Ceae; Rhizobium/Agrobacterium group; Agrobacterium. 7 Suzuki, K., Uraji, M., Ohta, N., Katoh, A. and Yoshida, K. Cructure of pTi-SAKURA (I): strategy for DNA sequencing of ge cherry-Ti plasmid acids Symp. Ser. 37, 159-160 (1997) 8 Acids Symp. Ser. 37, Uraji, M., Katoh, A. and Yoshida, K. Cructure of pTi-SAKURA (V): Complete nucleotide sequence of pTi-SAKURA (V		161

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUEMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (22-JUL-1998) Kazuo Yoshida, Hiroshima University, Faculty of Science; Kagamiyama 1-3-1, Higashihiroshima-shi, Hiroshima 739, Japan (B-mail:ksuzuki@ipc.hiroshima-u.ac.jp, Tel:0824-24-7456, Fax:0824-24-0733)
On or before May 14, 2001 this sequence version replaced gi:2982699, gi:2982703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gene 242
20184752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochim.
98193120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suzuki, K., Ohta, N., Hattori, Y., Uraji, M., Kato, A. and Yoshida, K. Novel structural difference between nopaline- and octopine-type trby genes: construction of genetic and physical map and sequencing of trb/tral and rep gene clusters of a new Ti plasmid pTi-SAKURA Blochim. Biophys. Acta 1396 (1), 1-7 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suzuki, K. and Yoshida, K. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suzuki,K., Hattori,Y., Uraji,M., Ohta,N., Iwata,K., Murata,K., Kato,A. and Yoshida,K.
Complete nucleotide sequence of a plant tumor-inducing Ti plasmid Gene 242 (1-2), 331-336 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Uraji,M., Suzuki,K., Ohta,N., Hattori,Y., Katoh,A. and Yoshida,K. Genome structure of pTi-SAKURA (IV): Characteristics of tra regio Nucleic Acids Symp. Ser. 39, 187-188 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ohta,N., Suzuki,K., Hattori,Y., Uraji,M., Katoh,A. and Yoshida,K. Genome structure of pTi-SAKURA (III): Characteristics of T-DNA Nucleic Acids Symp. Ser. 39, 185-186 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10721727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 206479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MDAVRTAVMNNRFNAIVEBASAAIYRTAHTTFVKIVQDYQCAIA
TAGEBRAYPMLSGVNVEVGS PLKFTLDAIGRENLKFGGIIITWDFFATDGLVYHLMD
VTLLYPIFFDEKLIAIGMAFVHASDIGGAVPGSISPAFTEVFOEGLRVRHEMD
LNEAIKSIFQDNSRIPTELWGDIQAMISGLKSMDRRVSELCERYDRQSVEEGMQDVIN
YAETKARAVIRTIRDGVYTESDYLEGHIDGQLAYEVMTVKDSEIEVDFTGTDPQLA
YASTKARAVIRTIRDGVYTESDYLEGHIDGQLAYEVMTVKDSEIEVDFTGTDPQLA
AAYNLVTGATTHPYIIQCLYAYILTVDPLTFRNSGILRAIHGHAPRGTVLNAVFPASG
GSRAASATRAYDVILGCLNQALEGGLAAAGGGNSGVIVVSADDRRTGRDRVNVVGTID
GGGGARGCVDGLDGSEVRYSQRSVPUBVIEETFVLVMEALRLVDDSREAGRFASGAAL
EIGEMENTE OND HITTHUN HOREVE DE MOGGGGAATAAIN VAN HER VER BENTE STANDAITHUN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGGAATAAIN VAN HER VAN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGAATAAIN VAN HOREVE DE MOGGGGAATAAIN VAN HOREVE DE MOGGGAATAAIN VAN HOREVE DE MOGGAATAAIN VAN HOREVE DE MOGGGAATAAIN VAN HOREVE DE MOGGAATAAIN                               /translation="msyqieigsircfvvaabelhfrraairlnmsqptlsqqikrle
elmgvqlfirstrrvdltragasffdhardillkideailnakleagglspggeelii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EIEMENTSNRAVITVRNLNRFVFAPWGFKGGEIGLLGKAVVNPGRPDERSVGKISVLE
LGQGDILRITSSTGGAFGEPLERDVAAIAREIENGMLSPERAADVYAVVFDRDSKIDE
AATAEHRRERANRKSDDFNFCIVRQRQDQVWSQQTRRELASRALTFEQRIRSQLVDRV
GAT SPATSQLLPLTLSRFRQRFPRTRLATKEVDSTELLRGTERGDFHVGLMRPPSNSN
                                                                                                                                                                                                                                                                                                                                      complement (1559. .2479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    HHRLLAKGERVDAGKLDQVIAEEAGRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="tiorf195"
/note="harm
                                                                                                              /protein_id="BAA87626.1"
/db_xref="GI:6498174"
                                                                                                                                                                                /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                       note="Putative transcriptional regulatory gene"
                                                                                                                                                                                                                                                                                                                                                                             /gene="tiorf1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="BAA87820.1"
/db_xref="GI:6498368"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="collection_site:
join(205959..206479,1.
/gene="tiorf195"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="hyuB gene homolog"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Agrobacterium tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              plasmid="pTi-SAKURA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mol_type="genomic DNA"
strain="MAFF301001"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . .206479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Japan
. 1435)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (from cherry tree) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tra region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
```

```
/translation="mdaTQFTLVAEDVHKNFGTLEVLKGISLTANKGDVVSIIGSSGS
GKSTFLKMFLETPNKGRIAVGLEVVVKTDAAGRLIGVDRKKIERNKMOLGHVFQS
FNLWGHMTULQNVNBGSPLHVLLAVFGCEVDRAMDFLDKVGIANKHAXVPSQLSGGQQ
RVSIARALAMQPSALLFDEPTSALDPELVGEVLKVIRKLAEEGRTMVVVTHEMGFARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MDIQLIIESFPKLLAAVPTTLTLAFISLLIGFVVSVPVALMRLS
KNRIVSSLAYGYVYIIRSTPLLVQMFLLIYYGSAQFRGVLSEVGLWSSFREPWFCALLA
LALMTAAYTSEIIRGGIQSVSLGGIEBARAVGMSTFLQFRRIVFFIAIRQALPAYGNE
VMLIIKSTSLASTITIVEVTGLAKQIISATYSFVEVFIVAGAIYLFITFVVSRLVMLA
EWMLNPHMRARVGGTAPKAAETH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AKLSREWSLRLLGDVYTTVVRGVPELLIIFLVFFGGGTLLRTIANGLFGYEGYIEPPI
FVIGVLCISVSAGAYATEVIRAAVLAVPPGQIEAAKSIGMGPWLRLRRVLIPQAARFA
LPGLGNVWQFTLKDTSLISVVGLVEIMRTAAMGAGSTKQPFTFYITAFVIFLLLSSVS
                                                                                                                                           /gene="tiorf6"
6016. .6951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (5022. .5795)
/gene="tiorf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (5022.
/gene="tiorf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KDAGGKLIGFDIDLGNDLCKRMNIECKFVEQAWDGIIFSLTAGRYDAIMAAMGIQPAR
EKVIARSRYYLLTPMTFLTTADSPLLKTQVALENLFLUNITPEGVAELDKFTKIFEGV
KFGVQAGTSHEAFYKQMMPSVQISTYDTIDNVVMDLKAGRIDASLASVSFEKEHLTAGS
DNKDLKMFGPRMTGGLFGKGVGVGIRKEDADLKALFDKAIDAAIADGTVQKLSQQWFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LVRFRHLLSERFVAVMPRQSALARKPALRLSDFAGHGVFALKRFELSCFETVYEQLSG
AGLLI ENDI AVSDTNTALALVTAGVGI TFLPEWVSAMAPDGVVTRVVDDMSVEI SMAV
GWNPDCPVPGI LPFVEFATLAAQNLI SARK"
                                                           catabolism"
                                                                                                                                                                                                                              VSSKVLFLEKGQIETQGTPQEVFQNPTSPRCRAFLSSVL"
                                                                                                                                                                                                                                                                                                                                                                   /protein_id="BAA87630.1"
/db_xref="GI:6498178"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /transT_table=11
/protein_id="BA887629.1"
/protein_id="BA87629.1"
/db_xref="GI.6498177"
/translation="MKFFNLNALAAVVTGVLLAAGPTQAKDYKSITIATEGSYAPYNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (4106. .4957)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NRGFLKAEKWANRGVRSQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (3321. .4031)
/gene="tiorf3"
/note="Probable nocR gene"
/codon_start=1
                                                                                     /gene="tiorf6"
/function="transcriptional
                                                                                                                                                                                                                                                                                                                                                                                                                                 trans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /function="involved in nopaline transport"
/note="Probable nocP gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YDASPKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (nopaline-binding protein)
/note="Probable nocT gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      function="involved in nopaline transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="tiorf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="tiorf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (4106. .4957)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  translation="MDLTLLQWGDAGWGDELARGAMMTVVVAACSYFFGIIFGSLFAA/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /transl_table=11
/protein_id="BAA87628.1"
/db_xref="GI:6498176"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /function="involved in nopaline transport"
/note="Probable nocQ gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="tiorf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (3321. .4031)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (2594. .3319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (2594. .3319)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="BAA87627.1"
/db_xref="GI:6498175"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /function="involved in nopaline transport"
/note="Probable nocM gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="tiorf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="tiorf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                 _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .5795)
                                                                                     regulator for nopaline
```

```
ঠ
                                                                                                                                                                         유
                                                                                                                                                                                                                                             ġ
                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                               중 유
                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
밁
                   ş
                                                   멍
                                                                                 Ş
                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 2141; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sd
                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                    361
                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
               CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                      CCTTGGGCGCGAGCAACAGTGAGTGGTTGCCTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                GTTCTCTCCGCTTATATCTATATTTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                      CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAAATGCCGCCGTACGAGAAAGGCACGAGAGGAAACGCGTTACCGGGTTTACCCTGACC
                                                           TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGCTCCCGAACC
                                                                                 CCGATTGATCTTAGTCATTTTCGTGGCCATTTCAAGTCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                          GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                      CGTGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MIOSLKLGGTAQEEEALSGMRRINRLPIIIVVULVVAFLGVIFY
GLTSRGLYFRGDEGPDTSSGNPASTFADQIKRGVSDGIIGEPQLVTTLQPTPVETQEE
KRAVNPFTPQPGRREEARPEAQELSEQVMRRAFLQEEQYLRERQRQRMARLQANDA
AYDSPIAVDRDKFAGRGADTAAMASATTNGVSTATTSGASDLYAALLRAGLGGQNGDP
NGQKSKEDFFNADLKELGYLPNRVVPQQSIYELKRGSVUPATLITGINSDLPGRITAQ
VSQNVYDSATGHRLLIPGGTKLFGRYDSKVSFGSRVLVVWTDIIFPNGSTLQIGGMA
GTDAQGYSGSRAVVDRKWLQFFGSAILIAVIGTGIDMAVPESSTLATQDTASDAARRN
FAETFGRVADRTIQRNMDVQPTLEIRPGYKFNVLVDQDIVFPGTYR"
complement (8637. .9113)
/gene="tiorf8"
complement (8637. .9113)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /transl_table=11
/protein_id="BAA87631.1"
/protein_id="BAA87631.1"
/db_xref="GI:6498179"
/translation="MRPCVFVMEKAMIQSRQLEAFRAVMLTGGWTSAANLVRITQPAI
SRLIRDLEEEIGISLFERTGNRLRPTREAGILFKEVSRHFNGIQHIDKVAAELKKSHM
GSLRVACYTAPALSFMSGVIQTFIADREDVSVYLDTVBGQTVLELVSLCHYDLGISIL
AGDYPGLTTESVPSFRAVCLLPGTHREDKSTVHATDLEGESLICLSFVSLLHNQTDA
ALDSCGVHCNRRIESSLALNLCDLVSRGMGVGIVDPFTADYYSANPVIQRSFDPVVPY
HFAIVLPTDSPPRLVSEFRAALLDALKALPYETI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (7308. . . 8624)
/gene "tiorf7"
complement (7308. . . 8624)
/gene "tiorf7"
/function="involved in conjugation"
/note="probable trb1 gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=1
/transl_table=11
/protein_id="BAA87632.1"
/db_xref="GI:6498180"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   function="involved in conjugation"
note="Probable trbH gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2044; DB 1;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                     420
                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                              540
   189126
                                                           189066
                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                     188706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                188886
                                                                                                                                                                                                                                                                                                           188826
                                                                                                                                                                                                                                                                                                                                                                        188766
                                                                                                                       189006
                                                                                                                                                                                    188946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                    δ
                                                                      음 성
                                                                                                                                    문
                                                                                                                                                         5
                                                                                                                                                                                                 문
                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                     밁
               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189607
                 190146
                                                                                                                                         190026
                                                                                                                                                                                                                                                                                                                                                                                        189787
                                                                                                                                                                                                                                                                                                                                                                                                                                                   189727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189187
                                                                                                                                                                                                                                                               189906
                                                                                                                                                                                                                                                                                                                           189847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA
                                                                                                                                                                 TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                    GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                             GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                           ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGTGCTTGTTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGCTTGTTTTTCCTTCCAGGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAGCGAACTGCTTCATGCTGCTGTA
                 TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                   TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                               TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                         TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCTCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCAGCCACCGAAGCTGTTCCATCGCGTTTACAGCGGTTGGCGTTGCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                                                                               င္ပ
                                                                                                                                                                         1499
                                                                                                                                                                                                                                    1439
                                                                                                                                                                                                                                                                                                1379
                                                                                                                                                                                                                                                                                                                                                                                                                        1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                 1619
                                                                                                            1559
                                                                                                                                          190085
                                                                                                                                                                                                       190025
                                                                                                                                                                                                                                                                  189965
                                                                                                                                                                                                                                                                                                                                                             1319
                                                                                                                                                                                                                                                                                                                                                                                           189846
                                                                                                                                                                                                                                                                                                                                                                                                                                                     189786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    189546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189186
                    190205
                                                                              190145
                                                                                                                                                                                                                                                                                                                               189905
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
AF126446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                       Pocas
 EATURES
                                                                                                                                                                         TITLE
                                                                                                                                                                                                         AUTHORS
                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        190566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            190506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1920
                                                                                                                                                                                       Otten, L., :
Ruffray, P.
                                                                                                                                                                                                                                                                                                                                                                             API26446 DNA linear BCT 25-FEB-API2646 p DNA linear BCT 25-FEB-Agrobacterium tumefaciens plasmid pTiC58 agrocinopine synthase (acs) gene, partial cds, and 5 protein (5), indole-3-acetamide hydrolase (iaaH), and tryptophan monooxygenase (iaaM) genes,
                              Submitted (08-FEB-1999) Cell
                                                                                                                                 Sequence and functional analysis of the left-hand part T-region from the nopaline-type Ti plasmid, pTiC58 Plant Mol. Biol. 41 (6), 765-776 (1999)
                                                                                                                                                                                                                                        Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                          Agrobacterium tumefaciens (Rhizobium radiobacter)
                                                                                                                                                                                                                                                                                                                                              complete cds.
AF126446
                                                    Direct Submission
                                                                                                                        20199402
                                                                                                                                                                                                                                                                                                                                AF126446.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAATAGAAATTA 190853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA 2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTACTTGGCGGGTTGCAGTTGTTCCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACATGACTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGCGTTTGCCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCGTTCCCGACAAAAAGAGCGATTCTGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGTCCCCGACAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGTATTTTGGCAAAGGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTACTTGGCGGGTTGCAGTTGTTCCTTCACCGGTGGATGGGTGGAGGGCGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCGGAGTTTGCCCAGCATCTAGTTCCCGCCTGCGCTGATTACGACCAAAATGTTGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATGGTAAAGGTCTGGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                (bases 1 to 5968)
cen,L., De Ruffray,P.
                                                                                                                                                                                                       (bases 1 to 5968)
cen, L., Salomone, J.Y., Helfer, A.,
Strasbourg 67804, France Location/Qualifiers
                                                                                                                                                                                                                                                                                                                              GI:4836565
                                                                  and
                                Biology, IBMP,
                                                                                                                                                                                                       Schmidt, J.,
                                  rue
                                  ď
                                                                                                                                                                                                      Hammann, P. and
                                  General
                                                                                                                                                                                                                                                                                                                                                                                                                                   BCT 25-FEB-2000
                                                                                                                                                                       of the
                                  Zimmer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1679
                                                                                                                                                                                                         De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            190805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       190329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190505
                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
```

```
/C-ARTHELET ION-"MESSALLDNQCDHFSTKWVDLIMVDKADELDRRVSDAFSEREAS /Cranel at Ion-"MESSALLDNQCDHFSTKWVDLIMVDKADELDRRVSDAFSEREAS /Cranel at Ion-"MESSALLCKRLADGRFBEI SACEKVAALSAYI YVGKEI LGRILESEPW ARARVSGLVAIDLAPFOMDFSEAQLLQTLFILLSGKCCAS SDLSHFVAI SI SKTARSFT LQMPPYEKGTTRRVTGFTLTLEEAVPFDWVAYGRNIMLKASAGSFPTIDLLYDYRSFT LQMPPYEKGTTRRVTGFTLTLEEAVPFDWVAYGRNIMLKASAGSFPTIDLLYDYRSFF DQCSDSGRI IGFFPEDVPKFKVAI IGAGI SGLVVASELLHAGVUDUTI YEASDRVGGKL WSHAFKDAPS VVAEMGAMRFPPAASCLFFFLERYGLSSMRPFPNGTTVDTNLVYQGIR YMMKAGQQP KLJFHVUXGWAAFLKDGFHEGDI VLASPVAI TQALKSGDI RRAHDSWQ TMLNRFGRESFSAI ERI FLGTHPPGGETWSFPHDNDLFKLMGISGGGFGFVEESGFI EILRLVINGYEENQRMCSEGI SELPRRI ATQVVVNGVSVSQRI RHVQVRAI EKEKTKIK IRLKSGI SELYKKVVVSGLANI QLRHCLTCOTTI FRAPVNQAVDNSHMTGSSKLFLL TERKKFMLDHILPSCVLMDGIAKAVYCLDYEPQDPNGKGLVLI SYTWEDDSHKLLAVPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MVPITSLAQTLERLRRKDYSCLELVKTLIARCQAAKPLNALLAT
DWDGLRATAKKIDRHCNAGLGL/GIPLCFKGNIATGIFFTSAATPALLNHLPNIPSRV
PQTLFSAGPLFGAS/GNMHELSFGITSNNYATGAVRNPWDFSLIPGGSSGGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRPTLARYPRDR.IIPVSFTRDTAGIIAQCVADV
IILDQVISGRSAKILPMPLKGLRIGLPTTYFYDDLDADVAFAAETTIRLLANRGVTFV
BADIPHLEELNGGASLDIALYBEPHALKKYLDDFVGTFLFLTFGQFIRSDVANIVSAQ
IDGHQISNDRYELARQSFRPRLQATYRNYFRLYQLDAVLFTPTAPLAAKAIGQESSVHI
NGSMMNTFKIYVRNVDPSSNAGLPGLSLPACLTFDRLFVGMEIDGLAGSDHRLLAIGA
ALEKAINFPSFPDAFN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /trānslation="MYHSRFIFNIIDSSNIQDRRELKLVLRHTEIAYRSFAQEDLIPA
QRSMMNSIINTDVFIIPAIDEVKRFCEVACLFGPAGIFLNINDSLTYVYCSSQAM
RKYAHKRFYDQVSDBGVVISTVPPYABGITKETMRSWHNNVCQNTSNETHDLDAYIAF
LPTSLQNPSFSHMKIGCDSFLAPSRVDPFCVEIIAVGKALFHDNGLKKKPKVWMSMAP
                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transI_table=11
/product="tryptophan monooxygenase"
/protein_id="AAD30489.1"
/db_xref="G1.4836569"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(1953. .3353)
/gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(<1. .19)
/gene="acs"</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /function="synthesizes
indole-3-acetamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (1953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3690. .5957
/gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="AAD30488.1"
/db_xref="GI:4836568"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /transT_table=11
/product="indole-3-acetamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TFLLKRLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /transl_table=11
/product="5 protein"
/protein_id="AAD30487.1"
/db_xref="GI;4836567"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product="agrocinopine synthase"
/protein_id="AAD30486.1"
/db_xref="GI:4836566"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(<1. .19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /strain="C58"
/db_xref="taxon:358"
/plasmid="pTiC58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Agrobacterium tumefaciens"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          function="synthesizes indole-3-acetamide from tryptophan"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              function="may catalyze synthesis of indole-3-lactate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          translation="MFNLGK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Ti plasmid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="acs"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indole-3-acetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrolase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         acid
```

INGERFELLADAISSESPERADIINVEACADYDQNVVQIDMITDEMAGALFULMENGEDF  PRESIDENTAL SECRET 2012.4; DE 1. Length 5958;  90.1%; SCOL BOO 0; Mismacches 126; Indels 2; Geps 2;  90.1%; SCOL BOO 0; Mismacches 126; Indels 2; Geps 2;  PORTOGRAMICTICACTUCICATIONAL TRANSCATIONAL TRANSCATIONAL TOTAL SECRET 1349  90.1%; SCOL BOO 0; Mismacches 126; Indels 2; Geps 2;  QV  TOTALACTICACTUCICACTUCACHARACTICACACCACACAGATICACACCACATIONAL TRANSCATIONAL TRANSCATI	Db 4410 ATCATTGGCGTTGCATCGGACTGGTTTCGATGGGGCGAACTGCTTCGATGCTGTTGT  Qy 781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT  Qy 781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT	Qy 601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGATTTTTTGACCAA Db 4290 TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTTGACCAA Qy 661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTTCCTAAGCCGAAAGTGGCG Db 4350 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCGAAAGTGGCG Qy 721 GTCATTGGCGCTGGCATTCCGGACTCGTTCTTCCGGAAGTGTTCCTAAGCCCAAAAGTGGCG Qy 721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACTGCTTCATGCTGGGGTA	Db 4110 TCCAGCGATCTTAGTCAGTCGCCATTCAATGTCTAAGACTGCCGGTTCCCGAACC  Qy 481 CTGCCAATGCCGCTGTAGGAATGGCATGAATGCGTTACCAGGGTTTACCATAACC  Qy 4170 CTGCAAATGCCGCTTACGAGAATGGCATGAACGGGTTACCCTGACC  CTGCAAATGCCGCCTTACGAGAAAGGCACGAACGAGTTACCGGGTTTACCCTGAAC  Qy 541 CTTGAAGGGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGGT  A230 CTTGAAGGGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGGT  CTTGAAGGGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGGT  A230 CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGCT	Qy 301 CCTTGGGCGGGCAACAGTGAGTGGTCTCGTTGCATTGGACACCATTTGCATG	Oy  121 CGAAGCTTCTAGGGAAGGATTATTTTGGCAAGGGCTCCACCAGTGCAGCGCTGGGTTA  Db 3810 CGTGAAGCTTCTAGGGAAGGATTACTCAAATCTCCAGGTGCAGCGCTGGGTTA  Oy  181 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCCTCAGCTGGTGAAAAGGTAGCA  Oy  281 GCTTGCAAAAGGCTGGCCGATGGTCGCTTTCCCCGAGATCTCAGCTGGTGAAAAGGTAGCA  Oy  281 GTTCTCTCCACTTATATCTATATTTGGCAAAAATTCTTGGGGATACTTGAATCGAAA  Oy  291 GTTCTCTCCGCTTATATCTATATTTGGCAAAAAATTCTGGGGCGGATACTTGAATCGAAA  Oy  3930 GCCCTCTCCGCTTACATCTATGTTGGCAAAGGAAAATTCTGGGGATACTTGAATCGAAA  Db 3930 GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAAATTCTGGGGATACTTGAATCGAAA	Query Match Best Local S Matches 2140  1 1 61 3750	KKERFCLLRDAISRSFPAFAQHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGEDF YSEBLFFQALDWTNDTGVYLAGCSCSSTGGWVEGAIQTACNAVCAIIHNCGGILAKDN PLEHSWKRYNYRNRN" BASE COUNT 1543 a 1333 c 1472 g 1620 t
	4469 4529 900 4589 	660 4349 720 4409	4169 540 4229 600 4289	360 4049 420 4109	A 180 A 3869 A 3929 A 3989	n 5968; 2; Gaps 2;	

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
AB025110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                 Sg
                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (18-MAR-1999) Takehide Kasahara, Nippon Paper Industries Co., Ltd. R&D Div., Wood Bio-engineering Central Research Lab., 5-21-1, Oji, Kita-ku, Tokyo 114-0002, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (iaaH), tryptophan monooxygenase (iaaM)
Published Only in DataBase (1999)
2 (bases 1 to 4660)
Kasahara, T., Endo, S., Ebinuma, H., Sugita
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Morimae,N.
Agrobacterium tumefaciens plasmid PO22 indole
יוֹבְּיוֹי לְּיִישְּׁרְמְּחֹחְׁאֵם monooxygenase (iaaM) genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tryptophan monooxygenase; indole acetamide hydrolase Agrobacterium tumefaciens (Rhizobium radiobacter) Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tryptophan
AB025110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Agrobacterium tumefaciens gene for tryptophan monooxygenase, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Morimae,N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kasahara, T., Endo, S., Ebinuma, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AB025110.1 GI:4586311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5-21-1, Oji, Kita-ku, Tokyo 114-(
E-mail:takek@mtj.biglobe.ne.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGATTTTTATTCTGAAGAACTTTTCCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTACTTGGCGGGTTGCAGTTGTTCCTTCACCGGTGGATGGGTGGAGGGCGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACATGACTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 4660)
/gene="iaaM"
2096. .4363
/gene="iaaM"
/codon_start=1
                                                                                                                                                                             EADIPHLEELNSGASLPIALYEFPHALKKYLDDFVGTVSFSDVIKGIRSPDVANIVSA
QIDGHQISNDEYELARQSFRPRLQATYRNYFRLYQLDAILFPTAPLAAKAIGQESSVI
HNGSMMNTFKIYVRNVDPSSNAGLPGLSLPACLTPDRLPVGMEIDGLAGSDHRLLAIG
                                                                                                      AALEKAINFSSFPDAFN"
                                                                                                                                                                                                                                                                                                                                                                                                      complement (353. .1756)
                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (353. .1756)
                                                                                                                                                                                                                                                                                                                                                                                                                      'gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Agrobacterium
|mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      strain="P022"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .4660
                                                                                                                                                                                                                                                                                                                                                                                                                                                             xref="taxon:358"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4660 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel:81-3-3911-5106(ex.292),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumefaciens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sugita, K., Kawaoka, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sugita, K., Kawaoka, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA linear BCT 27-MAR-1999 indole acetamide hydrolase and cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5788
                                                             á
                                                                                                      밁
                                                                                                                                        á
                                                                                                                                                                               망
                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 2134; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNT
                            2756
                                                                                                                                                                                 2636
                                                                                                                                                                                                                                                               2576
                                                                                                                                                                                                                                                                                                                                             2516
                                                                                                                                                                                                                                                                                                                                                                                                                        2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2096
                                                                                                                                               601
                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGTCAGCTTCACCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT 2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                       TGTTCCGATAGTGGACGGATCGGCTTCTTTCCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                            TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                     CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                            CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                               CTGCAAATGCCGCCGTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                          CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                           TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                   CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTCTCCGAAGCACAACTTCTCCAAACCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATTTCTCCGAAGCAACTAATCCAAGCCCTGTTTTTTGCTGAGCGGTAAAAGATGTGCA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTCTCCCCCTTATATCTATATTGGCAAAGAAATTCTGGGGCCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCATCGACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCTCTCCGCTTACATCTATGTTGGCAAGGAAATTCTGGGGCGGATACTTGAATCGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGTGAAGCTTCTAGGGGAAGGAGTTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                            TGTTCCGATATTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MSASPLLDNQCDHFSTKMVDLIMVDKADELDRRVSDAFSEREAS
RGRRITQISGECSAGLACKRLADGRPFEISTGEKVAALSAYIYVGKEILGRILGSEPW
ARARVSGLVAIDLAPPCMDFSEAQLLQTIFLLSGKRCASSDLSHFVAISIKTARSRT
LQMPPYEKGTTKRVTGGTLTLEBAVPFDMVAYGRNLMLKASAGSPFTIDLLYDYRSFF
DQCSDIGRIGFPEDVPKPKVAIIGAGISGLVVASELLHAGVDDVTIYBASDRVGGKL
WSHAFKDAPSVVAEMGAMRFPPASAFLTNDGFHEGDIVLASELLHAGVDDVTIYBASDRVGGKL
WSHAFKDAPSVVAEMGAMRFPPASGFTEFLERYGLSGMRPPPNPGTTVDTNLVYQGLR
YVWKAGQQPPKLFHRYVSGWRAFLRDGFHEGDIVLASSPVVITQALKSGDIRRAHDSWQ
TWLNRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVFESGFI
EILRLVINGYBENQRWCSEGISELPRRIAGVVNGVSVSGRIRHYQVRAIEKEKTKIK
IRLKGGISELYBKVVVTSGLANIQLRHCTCOTTIFFRAPVNQAVUNGHTMGSSKLFIL
TERKFWLDHILPSCVLMDGIAKAVYCLDYEPQDPNGKGLVPFTYTWEDDSHKLLAVPD
KKERPCLLRDAISRSFPAFACHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGEDF
KKERPCLLRDAISRSFPAFACHLVPACADYDQNVVQHDWLTDENAGGAFKLNRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YSEELFFQALDMPNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN PLEHSWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /transl_table=11
/product="tryptophan monooxygenase"
/protein_id="BAA76346.1"
/db_xref="GI:4586313"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.6%;
94.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1171 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
```

2335

240

2215

120

2395

600

2635

540

2575

480

2515

2455

360

2695

2815

2755

660

720

Length 4660;

۲. د.

Gaps

```
ঠ
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                       밁
                                          S
                                                                     밁
                                                                                        δ
                                                                                                                밁
                                                                                                                                          δ
                                                                                                                                                                      밁
                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                         3715
                                                                                                                                                                                                                        3595
                                                                                                                                                                                                                                               1500
                                                                                                                                                                                                                                                                       3535
                                                                                                                                                                                                                                                                                                1440
                                                                                                                                                                                                                                                                                                                        3475
                                                                                                                                                                                                                                                                                                                                                                         3415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2996
 1800
                                                                                                                                                                                                1560
                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2876
                                                                                                 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2936
                                       TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                     GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                      TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                         TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                     TGAAGAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                       GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTGCTTGTTTTTCCTTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTTGGTCACATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCATTGGCGCTGGCATTTCCGGACTCGTGGTAGCAAGCGAACTGCTTCATGCTGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
 GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTT
                                                                                                                         TACCACCATTTTTCGTGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGCTC
                                                                                                                                                                          TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                     TAAGGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGA
                                                                                                                                                                                                                        TGAGAAGGAAAAAAAAAAAAAAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                         TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                         GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                         ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGTCCTTCTCCAGCGATAGAGAGGATCTTTCTGGGCACGCATCCTCCTGGTGGTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGTTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGTGCTTGTTTTTCTTCCTCGAGCGGTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAAGGATGCTCCCAGCGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGATGTTACAATATATGAAGCAAGTGATCGGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                        GTCAAAACTCTTTCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                                              TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                         TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCTTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                                                                1499
                                                                                                                                                                                                                                                                                                                                               1439
                                                                                                                                                                                                                                                                                                                                                                                              1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
  1859
                                                1799
                                                                        3834
                                                                                                 1739
                                                                                                                                                 1679
                                                                                                                                                                          3714
                                                                                                                                                                                                                        3654
                                                                                                                                                                                                                                                1559
                                                                                                                                                                                                                                                                         3594
                                                                                                                                                                                                                                                                                                                        3534
                                                                                                                                                                                                                                                                                                                                                                         3474
                                                                                                                                                                                                                                                                                                                                                                                                                        3414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2875
                                                                                                                         3774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
ATU237588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                            FEATURES
                                                                                                                                                                                     JOURNAL
                                                                                   gene
                                                             SgO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2040
                                                                                                                                                                                                          Gielen, J
                                     complement(<1. .575)
/gene="torf1"
/function="unknown"</pre>
/codon_start=1
/transl_table=11
/product="hypothetical
```

```
GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                 ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGGTCCCCGACAAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTTCGAGATCTTT
                           TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA
                                                                                                                  CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGTTCCCGACAAAAAAGAGCGATTCTGTCTGCTGCGGGACGCAATTTCGAGATCTTT
TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAATAGAAATTA
                                                                                           CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGTATTTTGGCAAAGGACAA
                                                                                                                                                                                  TTACTTGGCGGGTTGCAGI
                                                                                                                                                                                                                                       TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                          GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACATGCCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                          ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGCGA
                                                                                           4314
                                                                                                                                           2219
                                                                                                                                                                                            4254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1919
                                                                                                                                                                                                                                       2159
                                                                                                                                                                                                                                                                                          4194
                                                                                                                                                                                                                                                                                                                                          2099
                                                                                                                                                                                                                                                                                                                                                                                          4134
                                                                                                                                                                                                                                                                                                                                                                                                                                        2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3954
```

Agrobacterium tumefaciens Ti AJ237588 AJ237588.1 GI:504277 acrocinopine synthase; agrocinopine synthase; IAH; isopentenyl transferase; nopaline synthase; ornithine cyclodeaminase; protein 6a; protein 6b; torf1 gene; torf10 gene; torf11 gene; torf12 gene; torf13 gene; torf14 gene; torf15 gene; torf16 gene; torf17 gene; torf18 gene; torf19 gene; torf20 gene; torf20 gene; torf3 gene; torf3 gene; torf5 gene; torf5 gene; torf7 gene; torf6 gene; torf6 gene; torf7 gene; torf8 gene; torf9 gene; tryptophan 2-monooxygenase. Agrobacterium tumefaciens (Rhizobium radiobacter)
Agrobacterium tumefaciens
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Rhizobium/Agrobacterium group; Agrobacterium. Gielen, J., Terryn, N., Van Montagu, M., and Villarroel, R. Complete nucleotide sequence of the T-DNA region of thinducing Agrobacterium tumefaciens Ti plasmid pTiC58 Unpublished Submitted (24-MAR-1999) Gielen Ledeganckstraat 35 Gent, 9000, Ledeganckstraat 35 Gent, 900 Location/Qualifiers (bases 1 to 29524) Submission complement(1. .575) /gene="torf1" /organism="Agrobacterium /mol\_type="genomic DNA" /db\_xref="taxon:358" /plasmid="pTiC58" bp DNA linear BCT (
plasmid pTiC58 T-DNA region. J., Genetics, BELGIUM tumefaciens" VIB/UG, the 즉 plant 09-JUN-1999 tumor

protein"

```
gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sg
                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product="hypothetical protein"
/protein_id="CAB44627.1"
/db_xref="G:5042182"
/translation="MIDGFHRCGNFGRSLTILARLRCENILKGDANTVRFGMLAQFEQ
RFALTLVSAGALSDLICAÇKARVLDENAGVDAVANLDQCLCSIDLVPARCRVHEVRGH
EAVHGIAEGKRLKKGSEPIATLFDDAATCDQIEAGKGEFDRVDADCLKAAQLSLEAVK
LAVRRCRIEARCDNIVINDEQF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /transl_tah'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(2090. .2644)
/gene="torf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MVQSPSGGIGGRRAGATRPLCEARRTRNPTGRRRRLQSGLSASE
LEIINNNIIATGSTNTASTDGELDSLEREIRRLEAIGVDTVELALISSLDLIAGGRIVKE
RGDRLRTLLETFSFRYTVHGLVSSNHVHDPATRRHQVDAKALVEICDSLIDARULVPHA
GFLRADQIAQRAGADERQCEALLELGEHAKAYGIRIAFENIFTTEPGQYRQTPAEVAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MHPEDRARGLRRAFRLHRFCLPSHPAQAYHRGDQLSPRVAINLFRQEIRRPRSGRQTRKIQEACLRMVGEQERPGLSKEERAFYAHAADYGIFAQLILDQCRQSIMTFTEVDBLGRDHDPYAVERKDHAGTAQARAIAAWRAADAPSSRRMVTAPTWISG
                                                                                                                                                                                                                                            RFACGSEEFLSKVRPLIEKVSAAA"
                                                                                                                                                                                                                                                              /translation="MGEESGEIPGASGRVWVIDPIDGTFNFVRGGONWAISIGLYENR
RPSFGVIYAPVRDLILVGGKTVPTRLNGQPIKPLPALDMSRASTGFSRFISDDLKISF
RPGGAATLSMIEVVNGETDGYVSLGDSTWDVMAALPILGHLGISNTIDWDRIDLSSKL
                                                                                                                                                                                                                                                                                                                                    /codon_start=1
/trans1_table=11
/product=-hypothetical protein"
/protein_id="CAB44629.1"
/db_xref="GI:5042184"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (2090. .2644)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EREIQRAAAVASKAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MPGEPAGQTALARLAMVADKLWTGEIRTQYAAICYRRTDDSSGP
IEVLLITSRGTGRWVIPKGWPMAKKKPHEVASQEAWEEAGVRGRVRKKAWGHYTYVKR
LGDGEFIPANVQWHLLDVQRWEDDFPERHQRELQWFSPRLAASAVGEPELRGLFARLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (1359. .1886)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (1359. .1886)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VITDGGMECSTGWTS"
                         /codon_start=1
/transl_table=11
                                                                                               complement (4009.
                                                                                                                   /gene="torf6"
                                                                                                                                               complement (4009.
                                                                                                                                                                   /rpt_family="T-DNA left border"
/rpt_type=DIRECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="hypothetical protein"
/protein_id="CAB44628.1"
/db_xref="GI:5042183"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVKAVNHPDVVALIDFKPRLPGIQLSRPRFPRSVARHGPVLGAPGRRLSRRTATTRIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="hypothetical protein"
/protein_id="CAB44626.1"
/db_xref="GI:5042181"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (604. .1479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (604. .1479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLVLLISGSATGGSMTNAANSTGSSGAGRTS"
/product="agrocinopine synthase"
                                                                      gene="torf6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="torf5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene="torf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene="torf4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="torf3"
/function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="torf2"
/function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="CAB44625.1"
/db_xref="GI:5042180"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene="torf3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="torf2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _table=11
                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SdD
```

```
/gene="torf10"
11195. .11890
/gene="torf10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MENQNTPVEAIERKLKSSWLHSLHVRKILPSPFLGGPYSYITEE
TDVGGEADCIRGHSVTPLPEDEGMVSHHMQQIFCSTHQPAAHDVDAFALRAAPEPAV
IPDEDIADKSVRPFASSENSDEINGEMVSHHMQQIFCSTHQPAAHDVDAFAVILEPSLP
IPDEDIADKSVRPFASSENSDEILDLMRRMPLSFRANMATQARKERDDAFRVILEPILPSLP
KEVKKYLRRSAQSIQTQEMRWQLKCHLPLWERGLFWLMVILVIMQLAVVLPDIVSASIGA
EVAVLRSGPITLQTQLMVLAIFDYPWADTRLAAHLACEVFLGGLPVLIFGLFAIAMPQ
HEGTTFHTAKDVAWKASLCILMQMLMQNRKNIRDLLKYSFLRMKRISTAQSSDFTSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANYRDFLTRKILPFQQSWVVRVLSESGLDEETLRAIKSCVFTPCCSIPGAVQPDRIWQ
HDSPIYIYTSLNLLSQYVEGKTLLRCYRKFVLASSLPPYRTDIPAEELKNVLNSILPG
AYSMPHAVSCFVAILPSKKFTISMSKITTRGGAEEHFVVFSREENDIIPYDIVAVGKT
                           /trānslation="mmvyQRPvfTvISLLrIrnreeaKLvLIgAvvvyrnfveQTLAD
AQKNWVKSLvLyDDPGDAVTGILTWFSRYACLHGPRLGPLDTIAVNDNPLYIYCPRRK
LEEYPKERIVSFHSEIGSVVCSMSPFDAGVTREKVRYGHNLISPGSCLLPDALEAYVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="torf9
9762. .10493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRLRNSSTIIYSWLDTFEVSNRLRIQIGYHKQDHEDALRVLRWVGHIADDNDRSPRGG
KAGILVAILTMAGLICLSTFFTDAYSGLIAAANLVFLAARAAVDVMDNSQSSHDLLRL
FTATAGVSFPSTLFVLGNSSYWLLTKKSFLAGFANIHFWIAFVLIFFLSLFPKLWGRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (7150. .8721)
/gene="torf8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MYYERPVFDIVDTWEIREREVLKPVLSVAEEDYCYFVQNTVASA
QRSWVDLVANLFNSPDSDIDDALNRFADAPCLHGPTLEPMNLILKGSPMYVYCSFEEM
RSCATKRFYEGISNRGVVICTVPPYAEGVTRDDMSVWQNQACVNTCSGKNDLDAYIAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MYNLGKGVQECTETSLLTALGGMERRNLSELDTTLTSDNLPVVS
HDPNTMRISTLEDRLIRELHSADVKNIPVI IRBVSNGEITESYTVTNDDIPFLEPLLD
KVFDVNPGATFFLDGRDFBAHIITAMLSRRFKYRQRVVLLFYTFEYSSGEAFFDAVKQ
VSPEDWRETVALMPVIFPQELPRLAKLIDLSDIAVEDLYEGGKIWIDSNLRQPWRVV
AVHIVMARVKPEQLGLCDKPEIVRAFNADYAAVRLAYYVKDNPEVRKWRPHLKLATAT
FLPSKSFLKLPYSVYEVHNDRYVHKFFALLPGSRFHFEVVAVGLAYPAAKKRPSGLGI
                                                                                                                           /product="hypothetical protein"
/protein_id="CAB44634.1"
/db_xref="GI:5042189"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              LFSQSDEEFGLPNLSFDELQNLIST"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="hypothetical protein"
/protein_id="CAB44633.1"
/brotein_id="CAB44633.1"
/db_xref="G1:5042180"
/translation="MHTSLMSYNQNMIPSGDDRPVFPTIDLFANTSLEELQQSLCAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /function="phosphatase"
/codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FMYVGSRLLNDRSRA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="hypothetical protein"
/protein_id="CAB44632.1"
/db_xref="G1:5042187"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (7150 . .8721)
                                                                                                                                                                                                                               /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LNYRLKLLF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPTSSLQESSYWHTKNGIYSFLAPSQTDAFCCEILCVGRALFEDRSRKEKLRNCLLKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="hypothetical protein"
/protein_id="CAB44631.1"
/db_xref="GI:5042186"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RCYDFSAQLENGEKAEFSINIRTGRPMPRETDERKYIRRGYGIPGNAAAIADWVISDR
SEDEMSFWEWRNKGVPRRVDHHCPHLDVIEQDGKSVP"
                                                                                                                                                                                                                                                                                                'function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene="torf9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="torf8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="torf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="CAB44630.1"
/db_xref="GI:5042185"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene="torf7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .10493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .6694
                                                                                                                                                                                                                                                                                                                                                                                                                                   .11890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              torf9"
                                                                                                                                                                                                                                  _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          table=11
```

```
Query Match
Best Local Similarity
Matches 2137; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                        20587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20167
                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT
                                                            GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA
                                                                                                                                  TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG
                                                                                                                                                                                                            TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAA
                                                                                                                                                                                                                                                                                      CTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATTTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTGGGCGCGAGCAAGAGTGAGTGGTCTCGTTGCCACCTTGCACCATTTTGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                                                                                                                        CTGCAAATGCCGCCTTACGAGAAAGGCACGACGAAACGCGTTACCGGGTTTACCCTGACC
                                                                                                                                                                                                                                                                                                                                                               CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                  TCCAGCGATCTTAGTCATTTCGTGGCCATTTCAGTCTCTAAGACTGCCCGCTCCCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTGCAAAAGGCTGGCCGACGGTCGCTTTCCCGAGATCTCAGCTGGTGAGAAGGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTGAAGCTTCTAGGGGAAGGAGTACTCAAATCTCCGGCGAGTGCAGCGCTGGGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATAATGGTCGATAAGGCTGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGTCAGCTTCAGCTCTCCTTGATAACCAGTGCGATCATTTCTCTACCAAAATGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAAGATGTTCCTAAGCCAAAAGTGGCG
                                                                                                                                                                                        TCGGCAGGTTCCTTTCCAACAATTGACTTGCTCTATGACTACAGATCGTTTTTTGACCAA
                                                                                                                                                                                                                                                                  CTTGAAGAGGCCGTACCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12368. .13312
/gene="torf11"
12368. .13312
/gene="torf11"
/function="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MMVPPRPGFAPLSLESINDRMEMHLFLTSACILYHIYIRDNLLI
YQEIWYKYMRGRLAESALKNEISALYLENFPRPPTLOSIAEQEVICKDAAPIYYYCS
REAMLSHVQSKDLCQPGRANLLACTLAPYRTGVTIEMVCLFKRLRDGNRVEAGTGE
DLSHFVAFLPTTAFRRGFRFYLGGENVQFFLREGGLELPCHINAFGRALFSEILADGS
SWDWKSVGESSRLNHVRASVELSRNVPTAETTDNWAEAALGTDAVYPVRPPNLTPTQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="hypothetical protein"
/protein_id="CAB44635.1"
/db_xref="GI:5042190"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88.9%;
94.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 2016.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                              20706
                                                                                                                                                                                                                                                                                                                                                                                                                  20466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                        20646
                                                                                                                                                                                                                                                                  20586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                   Ś
                                                        밁
                                                                                   Ś
                                                                                                                              밁
                                                                                                                                                           Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뒩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21247
                                                                                                                                                                                                            21666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20947
1860 GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTT
                                                                             GAATGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTT
                                                                                                                                                                                                                                                                                                         TACCAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATC
                                                                                                                                                                                                                                                                                                                                                                                     TAAGGTGGTGACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAAGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGATGTTACAATATATGAAGCAAGTGATCGGGTTGGAGGCAAGCTTTGGTCACATGCT
                                                                                                                                                     TGTCCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC
                                                                                                                                                                                                            GTCAAAACTCTTCCTGCTGACTGAACGAAAATTTTGGTTAGACCATATCCTCCCGTCCTG
                                                                                                                                                                                                                             GTCAAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTG
                                                                                                                                                                                                                                                                                                                                                              TAAGGTGGTGGTTACATCTGGACTCGCAAATATCCAACTCAGGCATTGTCTGACATGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGAAAGAAAAGATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAAGTGGTTAACGGTGTGTCTGTAAGCCAGCGTATACGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAAGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGTCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTTTCATGAGCGAGATATTGTGTTTGGCCTTCGCCTGTCGCTATTACTCAGGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                  TGTCCTCATGGACGGGATCGCAAAAGCAGTGTACTGCCTGGACTATGAGCCGCAGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTTCGCTTGGTCATAAACGGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACATGGAGTTTCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGGAGACATTAGGCGGGCTCATGACTCCTGGCAAACTTGGCTGAACCGTTTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTTTCCATGAGGGAGATATTGTGTTGGCTTCGCCTGTTGCTATTACTCAAGCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGCACAGTCGACACTAACTTGGTCTACCAAGGCCTCCGATACATGTGGAAAGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCAAGGACGCTCCCAGCGTGGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1140
                                                                                                 1859
                                                                                                                                    21785
                                                                                                                                                                         1799
                                                                                                                                                                                                            21725
                                                                                                                                                                                                                                                   1739
                                                                                                                                                                                                                                                                                                                            1679
                                                                                                                                                                                                                                                                                                                                                                                                    1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                        21665
                                                                                                                                                                                                                                                                                                                                                               21605
                                                                                                                                                                                                                                                                                                                                                                                                                                       21545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20826
```

δ

밁

음 성 음

중 음 중

중 유

ち 음 ち

유왕

음 성

음 성 음

 유 성

```
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
ATTAIAAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                             gene
                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21846 GGCGGTTCCCGACAAAAAAGGCGATTCTGTCTGCTGCGGGACGCAATTTCGAGATCTTT 21905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 7402 to 8783)
1 (bases 7402 to 8783)
1 (bases 7402 to 8783)
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Tinland,B., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Paulus,F., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Otten,L.
Bonnard,G., Szegedi,E. and Ot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X56185.1 GI:39133
iaaH gene; iaaM gene; indoleacetamide hydrolase; ip isopentenyl transferase; tryptophane monooxygenase. Agrobacterium tumefaciens (Rhizobium radiobacter) Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (03-DEC-1990) G. Bonnard, INSTITUT DE BIOLOGIE
MOLECULAIRE DES, PLANTES DU CNRS, 12 RUE DU GENERAL ZIMMER,
STRASBOURG CEDEX, FRANCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bonnard,G., Vincent,F. and Otten,L. Sequence of Agrobacterium tumefaciens biotype III auxin genes Plant Mol. Biol. 16 (4), 733-738 (1991) 91329707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTAIAAH
10200 bp DNA lin
A.tumefaciens Tm4 Ti plasmid DNA with TA-iaaH
TA-iaaM, T-ipt and T-6 genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bonnard, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 III Agrobacterium strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X56185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1868204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2546041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTCTACGAACACTCTTGGAAGAGATATAACTACCGCAATAGAAATTA 22253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTCT-CGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA 2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGTATTTTGGCAAAGGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTACTTGGCGGGTTGCAGTTGTTCCTTCACCGGTGGATGGGTGGAGGGCGCTA-TCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTACTTGGCGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACATGACTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCGCCGTTTGCCCAGCATCTAGTTCCCGCCTGCGCTGATTACGACCAAAATGTTGTTCA 21965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCGGCGTTTGCCCAGCACCTATTTCCTGCCCTGCGCTGATTACGACCAAAATGTTATTCA 1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 10200)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gen. Genet. 216 (2-3), 428-438 (1989)
complement(join(192..653,3369..4319))
/gene="TA-laaH"
/codon start=1
/transT_table=11
                                                                                                               complement (join(192.
/gene="TA-iaaH"
                                                                                                                                                                       /db_xref="taxon:358"
/plasmid="Ti"
                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                  /mol_type="genomic DNA'
/strain="Tm4"
                                                                                                                                                                                                                                                                                       organism="Agrobacterium"
                                                                                                                                                                                                                                                                                                                       .10200
                                                                                                                                             .653,3369.
                                                                                                                                                                                                                                                                                          tumefaciens"
                                                                                                                                          .4319))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  near BCT 06-JUL-2002 interrupted by IS866,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   jqt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            range biotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ø
  BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                COUNT
                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region repeat_region
                                2436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                 /gene="T-6b"
/codon start=1
/transT_table=11
/protein_id="CAA39648.1"
/db_xref="GI:39136"
/db_xref="SWISS-PROT:P25019"
                                                                                  /translation="mtvanwqvrdftriinagelqgrleqartdfgallaeivyfhpp
gatpeegddeyiltgqglvyvylseqtarqcalnrllpsnssnfgtvvtaippwlmdt
qtlnltlqercdqggivnyyhgsrtnefflaimlsncfvrfgtdeingasygfyarrg
                                                                                                                                                                                                                                                                                                                                                                                                                           YMWKAGQOPKLIFHRYYSGWHAFLKDGFLEGDIVLASPDAITEALKSGDIRRAHDSWQ
IWLNRFORESFSSAIERIFLGTHPPGGSTWSFHDWDLFKLMGLGSGGGFGPVFESGFT
EILRLVINGVEEROQRWCSGGISELFRRIASQVVNGVUSGORIHVQVRAIEKEKTKIK
IRLKSGISELYDKVVVTSGLANIQLRHCLTCDTTIFRAPVNQAVDNSHMTGSSKLFLL
TERKFWEDHMLFSCVLMGGFAKAYVCLLDYEPQDHOKGLVLISYTWEDDSHKLLAVPD
KKERLCLLRAJISKSFEVFAGHLVAÇADYDQNVVQHWUTDBNAGGRFKLNRFGCED
YSEELFFQALDTTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              646. .653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MVPITSLAQTLERLRRKDYSCLELVETLIARCEAAKALNALLAT
DWGGLRRAKKIDRHGNAGVGLRGIPLCFKANIATGIF PTTAAFUPALINHLPKIPSRI
AERLFBAGALDGASGNHFLESFGITSNNYATTAAVRNPMNPSLIPGGSSGVAAAVASR
LMLGGIGTDTGASVRLPAALCGVVGFRPTLGRYFRDRIIPVSFTRDTAGIIAQCVADV
VILDQVISGRPARILPIPLKGLRIGLPTYFYDDLDADVAFAAETTIRLLANRGVTFV
VILDQVISGRPARILPIPLYEFPHALKQYLDFVGTVSFSSFSDVIKEIRSDDVANI
VNAQIDGHQISNAEYELARQSFRPRLQAAYRNVFRLYRLDAILFPTAPLAKAIGQNS
SVIHNGSMVNTFKIYRNVDBSSNAGLPGLSLPVGLTPDRLPVGMEIDGLAGSDHRLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/trans1_table=11
/product='isopentenyl transferase"
/protein_id="CAA39647.1"
/db_xref="GI:39135"
/db_xref="SWISS-PROT:P25018"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /insertion_seq="IS866"
3370..3377
4485..4490
                                                       NYTEEGEDDDNEIGDEGEAGGAEIRDYQFGDLVNYPIVALGSSRLSA"
                                                                                                                                                                                                                                                                                                                                                                /gene="T-6b"
                                                                                                                                                                                                                                                                                                                                         complement (9013.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLKHPWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4657.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AIGAALEKAINFRSFPDVLN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="T-ipt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7613. .8335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4657. .6924
/gene="TA-iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="TA-iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Ssp I junction site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAA39649.1"
/db_xref="GI:39137"
/db_xref="SWISS-PROT:P25016"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            product="indoleacetamide hydrolase"
                             ω
                                                                                                                                                                                                                                                                                                                                                                                                   .9636)
```

901 TTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAAT 960	y 781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG		y 301 CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360	181 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240	Pred. No. 0;  0; Mismatches 227; Indels  CCTTGATAACCAGTGCGATCATCTCCCAACCA              TCTTGATAAACAATGCGATCATTTCTCTACCA  GGCGGATGAATTGGACCGCAGGGTTTCCGATC	87 Q#.
Oy 1980 ACATGATTGGCTTACAGACGAGATGCCCGGGGACGTTTCAAACCGACGACGACGACGAGACGAGAGACGAGAGACGAGAGACGAGAGACGAGAGACGAGAGACGAGAGACGAGAGACGAC	1920 GCCGGCCAAAAAAGAGAGAGTTATGTCTGCTGCGTGACGCAAAAATGTTATTCAAAATCTTT  1920 CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGTGACGCACCAAAATGTTATTCA  1920 CCCGGCGTTTTGCCCAGCACCTATTTCCTGCCTGCGTGATTACGACCAAAATGTTATTCA	1740 6396 1800 6456	TACCAATATTTTTCAGGCACCAGTGAACCAAGCGTTCATAACAGCCATATGACAGGATC		120 ACATGMENT TO THE CONTROL OF THE	5677 1081 5737 1141 5797 1201 5857	OY 1021 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTTACAACGGTTGGTGGTGCTTCATGAACGAC 1080

 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B
 S
 B

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
AVU83987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
     CDS
                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (07-JAN-1997) Institute for Plant Molecular Biology, rue du General Zimmer 12, Strasbourg 67084, France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Otten, L. and De Ruffray, P. Sequence and functional analysis of the shoot-inducing octopine T-DNA of Agrobacterium vitis strain CG474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agrobacterium vitis (Rhizobium vitis)
Agrobacterium vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AVU83987

15463 bp DNA linear BCT 02-Magrobacterium vitis plasmid pTiTm4 agrocinopine synthase and genes, (iaaH) pseudogene, and (iaaM), (ipt), (6b) and (ocs) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Otten, L. and De Ruffray, P. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rhizobiaceae; Rhizobium/Agrobacterium group; Agrobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U83987.1 GI:1814322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Complete cds.
U83987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA 2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAA 2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCGTGTAACGCCGTCTGCGCAATTATCCACAATTGTGGAGGCATTTTAGCGAAGGACAA 6875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 15463)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 15463)
     /gene="5"
2235. .291
                                                                                                                                              /codon_start=1
/trans1 table=11
/product="agrocinopine synthase"
/product="agrocinopine synthase"
/protein_id="agrocinopine synthase"
/protein_id="ABB41872.1"
/db_xref="GI:1814323"
/trans1ation="MEGTAWPAWTLHWDLPENVTPPEVLARHSVPKLLERLEENLPLQ
VIEHRGMFNLGNRIQECTASSLLAALGQGGRNLSELDVCLTSDNIPVVSHDLNTWRVS
EKLGDKFFNEHSSDINNVPVIIREVSNGIIQDRYRETIDHIPLLDEILGKVFSANPD
ATIFLDGRNYEAHVIVAMLSHRPVYHQRAVVLFYTFEYPDGGAFVDAVLTAQPASDWR
KSIALMPALFPEELCRLARLRQVSEPTVDDLYLAGKAWIDSLLMQDWRVVAHVVFSE
                                                                             EWRNQGIDREVSHLSPHLDVDVGTSE"
                                                                                                      VSRNLLDRVVDKDVLLAFDSDQAAVRLAHYVKEDTMIKAKRPHLKFAAVTRCYDFAAL
LNSGERAEFSIDINTGRARPHETDERKHIRWRKGTPGNSATIADWVISDRSEDEMAIW
                                                                                                                                                                                                                                                                                                                                                                                                                  complement (373.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   139. .15310
'note-":
                                                                                                                                                                                                                                                                                                                                                                                                                  /note="flanking repeat; left border of the T-DNA"
complement(373. .1629)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3857. .6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="genomic DNA"
/strain="Tm4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="shoot-inducing octopine T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Agrobacterium"
mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Agrobacterium vitis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insertion_seq="IS866"
5438. .>15463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plasmid="pTiTm4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .15463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type="genomic DNA"
_xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vitis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BCT 02-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genes,
                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                         Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SgS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10824. .11546
/gene="ipt"
10824. .11546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKCSDSGRIGFFPEDVPRPKVAVIGAGISGLVVASELLHAGVDDVTIYEAGDRVGKL
WSHAFKDAPGVVAEMGAMRFPPAASCLFFFLERYGLSSMRPFPWFGTVDTDLVYEGCR
YMWKAGQOPEKLFHRYKSGMHAFLADGFLEGDIVLASPDAITBALKSGDIRRAHDSWO
IWLNRFGRESFSSAIERIFLGTHPPGGETWSFPHDWDLFKLMGIGSGGFGPVPESGFT
EILRLVINGYEENQRWCSEGISELPRRIASQVVNGVSQRIHVQVVRAIEKEKTKIK
IRLKSGISELYDKVVTSGLANIQLRHCLTCDTTIFRAPVNGAVDNSHMTGSSKLFLI
TERKFWEDHMLDSCVLMDGPAKAVYCLDYEPQDDNGKGLVLISYTWEDDSHKLLAVPD
KKERLCLLRAISKSFPVFAQHLVPACADYDQNVVQHDWLTDENAGGRFKLNRRGEDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
/trans[_table=11
/protein_id="ABB41874.1"
/protein_id="ABB41874.1"
/db_xref="GI:1814325"
/translation="MSASSLLDKQCDHFSTKIVDLIMVDKADELDRRVAAAFSEREAS
/ERRISQISGECNAGLACKRLADGRFPEISAGQRVAVLSAYIYVGEBILRWILEPEAS
RERRISQISGECNAGLACKRLADGRFPEISAGQRVAVLSAYIYVGBEILRWILEPEAS
VRTRVSGLVALDLAPSCMDISRAQLLQTMNLLGGKRCAPSDLSHFVALSISETARSRT
LQMAPYEEGSLKSVTGFTVIIEEAVPFDMVAYGRNLMLKASAGSFFTIDLLXDYRLFL
LQMAPYEEGSLKSVTGFTVIIEEAVPFDMVAYGRNLMLKASAGSFFTIDLLXDYRLFL
                                                                                                                                                                                                                                                                                                                               /protein_id="AAB41875.1"
/db_xref="G1:1814326"
/db_xref="G1:1814326"
/translation="MDLFLIFGPTCTGKTSTAIALAQQTGLPVLSLDRVQCCPQLSTG
/translation="MDLFLIFGPTCTGKTSTAIALAQQTGLPVLSLDRVQCCPQLSTG
SGRPTVEELKCTTRLYLDDRPLVKGIIAAEQAHERLIAEVYNYEAHGGLILEGGSISL
LKCMAQSGYWSADFRWHIIRHKLADEETFMKAAKARVKQMLCPAIGPSLIQELVYLWN
/translation="mtvAnwQvrdftrilnagelQgrleQartdfgallaeivyfhpp
GatpeegddeyiltgQglvyvylseQtarQCalnrllpsnssnfgtvvtaippwlmdt
QtlnltlQerCdQggivnyyhgsrtnefflaimlsncfvrfgtdeingasygfyarrg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type=direct 6581. .6588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/transl_table=11
3857...3864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Codon_start=1
/trans1_table=11
/protein_id="AAB41873.1"
/protein_id="ABB41873.1"
/db_xref="01:1814324"
/trans1ation="MDHSRPIFNVIDCSHIQDRRELEIVLLATRRAYLRFAQQDLIPA
/trans1ation="MDHSRPIFNVIDCSHIQDRRELEIVLLATRRAYLRFAQQDLIPA
/trans1ation="MDHSRPIFNVIDCSHIQDRRELEIVLLATRRAYLRFAQQDLIPA
/RSWIDSIIDTNVPIDPAIDEVKRERSVACLPAPVGMSLAIVLNDSLMYVVCSFQEM
RRYACERFYEGFSGKGVVISTVPPYSQGITKEAMRCWQNEVCHITNNEKNDLDAYIAF
LPNTSLQNTSPSHVKIGGDAFLAPSRADPFCVEIVAVGKALFQDNGLKKAPKAGWSMA
                                                                                                                                                                              /gene="6b"
                                                                                                                                                                                                                                                                               EPRLRPILKBIDGYRYAMLFASQNRITFDMLLQLDADMEGKLIHGIAQEYLIHARRQE
HEFPPVSAAAFEGFEGPPFGAY"
                                                                     /codon_start=1
/transl_table=11
/protein_id="AAB41876.1"
/db_xref="GI:1814327"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YSEELFFQALDTTNDTGVYLAGCSCSFTGGWVEGAIQTACNAVCAIIHNCGGILAKDN
PLKHPWKRYNYRNRN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'gene="i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7868. .10135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(join(3403. .3856,6589.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          insertion element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(3403. .7530)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_type=direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note="flanking repeat; right border of the IS866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="flanking repeat; left border
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="interrupted by the bacterial insertion element
                                                                                                                                                                                                                                                      ement (12224.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10135
                                                                                                                                                                                                         .12847)
                                                                                                                                                                                                                                                            12847)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .7530))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the IS866 insertion
```

ADECUMENT 3873 A 3655 C 3902 G 4023 E TOPICADAGATICACATORICA TORAN TOPICAL TOPICA AND TOPICAL TOPICA AND TOPICAL TOPIC	CDS complement(1377914855) /gene="oce" /codon_start=1 /trans1_table=11	NYTEEGEDDDNEIGDEGEA e complement(13779 /gene="oce"
811 TYCANGGAACGCTCCTANGTGTCGGAAANTGGGGCGAATTCCGAATTCCCTCTGTGTGCTACA	Qy 781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	QY 721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGCTAAACGAACTGCTTCATGCTGGGGTA 780

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
AVU83986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
   misc_feature
                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AVU83986 14960 bp DNA linear BCT 02-1 Agrobacterium vitis plasmid pTICG474 agrocinopine synthase, and (iaaH) genes, (iaaM) pseudogene, (ipt) and (6b) genes, and (iaaH) genes, (iaaM) pseudogene, (ipt) and (b) genes, (iaaM) pseudogene, (ipt) and (b) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (iaaM) genes, (iaaM) pseudogene, (ipt) and (ibaaM) pseudogene, (ipt) and (ipt) and (ipt) and (ipt) and (ipt) and (ipt) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (07-JAN-1997) Institute for Plant Molecular Biology, rue du General Zimmer 12, Strasbourg 67084, France Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Otten, L. and De Ruffray, P. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Otten,L. and De Ruffray,P. Sequence and functional analy T-DNA of Agrobacterium vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Agrobacterium vitis (Rhizobium vitis) Agrobacterium vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and (iaaH) genes, (ocs) pseudogene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria; Proteobacteria; Alphaproteobacteria;
Rhizobiaceae; Rhizobium/Agrobacterium group; Aç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U83986.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTCTTAAACACCCTTGGAAGAGATATAACTACCGCAATAGAAATTA 10134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTACTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGATTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACATGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGGCGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGGTCCCCGACAAAAAAGAGAGATTATGTCTGCTGCGTGACGCAATTTCAAAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTTCGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCGTGTAACGCCGTCTGCGCAATTATCCACAATTGTGGAGGCATTTTAGCGAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCGTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTACTTGGCGGGTTGCAGTTGTTCCTTCACCGGTGGATGGGTGGAGGGCGCTATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGATTTTTATTCTGAAGAACTTTTCTTTCAAGCGCTGGACACGACTAATGATACTGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATGATTGGCTTACAGACGAGAATGCCGGCGGACGTTTCAAACTTAACCGACGCGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCGGTGTTTGCCCAGCATCTAGTTCCCGCCTGCGCTGATTACGACCAAAATGTTGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 14960)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 14960)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pseudogene, complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:1814315
      /insertion_seq="IS869"
252. .14745
                                                                                                                                                                                                                                                                                           /db_xref="taxon:373"
/plasmid="pTiCG474"
7244. .8395
                                                             8
                                                                                                                                               insertion seq="IS870-like insertion; 1921 .12767
                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                 /organism="Agrobacterium
/mol_type="genomic DNA"
/strain="CG474"
                                                                                                                    organism="Agrobacterium
                                                                                                                                                                                                                                                                   organism="Agrobacterium vitis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .14960
                                                          xref="taxon:373"
                                                                                                                                                                                                         xref="taxon:373"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              analysis of the shoot-inducing octopine vitis strain CG474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a; Rhizobiales;
Agrobacterium.
                                                                                                                                                                                 element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genes, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BCT 02-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10026
                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                        Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="5"
/Codon_start=1
/transT_table=11
/protein_id="ABP41869.1"
/protein_id="ABP41869.1"
/db_xref="GI:1814319"
/translation="MRIWCMRTGVSFTVSPTDHQRLMALTRDRNAPQKHVWRSEIILL
SADGVGTVELMRQTGKSKTCYWRWQBRFAABGVEGLLRDKTRPSRIVBLGPDVAERVV
ARRILIRRARROHWTADMMATVAGISASAVRRIWKAHGLAPHRWRQFKLSNDPKFVDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MVSITSLAQSLEHLRRKDYSCLELVETLIARCEAAKSLNALLAT
DWDGLRSAKKIDRHCNAGVGLGGIPLCFKANIATGVPFTSAATPALINHLPKIPSRV
AERLFSAGALFGASGNMHELSFGITSNNSAVNOWPFTSAATPALINHLPKIPSRV
AERLFSAGALFGASGNMHELSFGITSNNSAVNOWPFTSAATTPALINHLPKIPSRV
LMLGGIGTDTGASVRLPAALGGVVGFRPTLGRYPRDRIIPVSFTRDTAGIIAQCVAVASR
LMLGGIGTDTGASVRLPAALGGVVGFRPTLGRYPRDRIIPVSFTRDTAGIIAQCVAV
IILDQVISGRPARILFIPLFKGLRIGLFTTYFYDDLDADVAFAAETTIRLLANRGVTFV
EADIPHLEDXXXGASLFIALYEFPHALKQYLDDFVGTVSFSDVINGIRSPDVANIVKA
QVDGHGISSDBYELARQSFRPRLQATYRRLYDLDAILFPTAGFLAAKAIGDFSVT
LNCGRWYTTSTAUTDRICK FORMATIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MALNVRVLYILLTMTCHNIPFFAQVLCQRKPHKVEGTVWPAWT
LHWDLENVTPLDVLARHSVPRLLERLEDLFLQVIERGMFNIGKRIQSCTASSLLA
GLGQEGRNLERBMDVCLTSDNVAIVSHDLNTMFVESKLCDKLFNEIHSSKIKOVTVIER
EVSNGIIQDKYFETVDHIPSLTEILGKVFLANPDATIFLDGRNYEAHVIVAMLSHRPE
YQRVVVLFYTTEYPHGGAFVDAVLKAQPASDWRKSIALMPALFPEELCRLARLRQVT
PHQRVVVLFYTTEYPHGGAFVDAVLKAQPASDWRKSIALMPALFPEELCRLARLRQVT
EPTVDDLYLAGKAMIDSMINDAMNIVAHVVPSGVTRNLLGQVVDKVVLLAFDSDEBA
VRLAYYVKEDTMIRAKRPHLKFAAVTRCYDFAALLDCGERGEFSIDIKTGRARRHETD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="myHSRPIFNVIDSSNIHGRRELKLFLRHVEIAYRSFAQRDLIRA
QRSLINSIINIDVPIDPAIDEVVNRFCEVACLQGPAGIPLTIILNDSLMYVYCSFREM
RRYAHKRLYDGVSDGSVVISTVPPYTEGIRKETMRSWQNNVGENTSDEIHNVDAYIAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (3569. .4972)
/gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2363. .3046
/gene="5"
                                                                                                                                                                                                      7301. .8395
/gene="ORF1"
                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="iaaM"
/note-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AALEKAIDIHLFPNVLN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HNGSTMNTFKIYVRNVDPSSNAGLPGLSLPVHLTPHRLPVGMEIDGLAGSDHRLLAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="AAB41868.1"
/db_xref="GI:1814318"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
/transl_table=11
/protein_id="AAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="iaaH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (3569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTSLWKRLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPTTSLQNPSVSHMKIRCNSFLAPSRVDPFCVEIIAVGKALFEDNGLKKKPKLWGEMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /transl_table=11
/protein_id="AAB41867.1"
/db_xref="GI:1814317"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERKHIRWRKGTPGNSATIADWVISDRPEDEMAIWEWRNQGIDREVSHLSPHLDVSVET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="agrocinopine synthase"
/protein_id="AAB41866.1"
/db_xref="GI:1814316"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (496. .1854)
                                                                                                                                                                                                                                                                'gene="ORF1"
                                                                                                                                                                                                                                                                                                  /rpt_type=direct
7301. .8395
                                                                                                                                                                                                                                                                                                                                                  /note="flanking repeat; left border
insertion element"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'pseudo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'gene="iaaM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="shoot-inducing octopine T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="interrupted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                        table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            by a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8720)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bacterial IS870-like insertion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     left border of the T-DNA"
                                                                                                                                                                                                                                                                                                                                                                                    of the IS870-like
```

QY 301 CCT       Db 5606 CCA	Qy 241 GTTV       Db 5546 GTC	5486 G	0v 181 GC	121 C	Qy 61 CTO	Qy 1 ATK    Db 5306 ATK	Query Match Best Local Sim: Matches 1733;	BASE COUNT 38	morfal Trandar	) 	CDS	gene			CDS	gene			CDS	gene		repeat_region	
CTTGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATG 360 	GTTCTCCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAA 300 	<b>≽</b> —	CGAGAATCTTCTAGGGCAATGAGAATTACTCAAATTTCCGGCGAGTGCAGCGCTGGGTTA 5485 GCTTGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAAGGTAGCA 240	TTCTAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 1	CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120 	ATGTCAGCTTCACCTCCTTGATAACCAGTGCGATCATCTCCCAACAAAATGGTGGAT 60 	69.7%; Score 1581.4; DB 1; Length 14960; imilarity 88.8%; Pred. No. 0; Conservative 0; Mismatches 216; Indels 2; Gaps 2;	854 a 3510 c 3632 g 3958 t 6 others		/pseudo /codon start=1 /transI_table=11 14719	complement(1321414290) /gene="ocs"	complement(1321414290) /gene="ccs"	/ translation = MTVANWQVRDLTLILSAGEIQSRLEQARTDFGALLGDIVYFQPS / translation = MTVANWQVRDLTLILSAGEIQSRLEQARTDFGALLGDIVYFQPS VISLGEFDDEYIFSGQELVYVYLREDIARQCALRRNLPSNSSNFGIVATAIPPWLMNA HGLNQVLLQRCDFGGLNYYYQGFHTNQFFLANMRSNCFVRFASDVINNESYGFYARGG NYTERAGGGENDRYDDFGFBGABATTFSGTGNT.TNYBIVALGSCTLSA =	/codon_start=1 /transI_table=11 /protein_id="AAB41871.1" /dh_vef="gr_1814371"	/gene="ob" complement(1081611439) /gene="ob"	OBFPPVSVAFEGFFGMC" Complement (1081611439)	SGRPTVEELKGTTRIXIEDREJFGETALIGETVINZELGETVINZELGETVELGETALIGETVELGETALIGET VEGETALIGET GELVELGETALIGET GELVELGET LGET GELVELGET ELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGET GELVELGT G	/transl_table=11 /protein_id="AAB41870.1" /db_xref="GI:1814330" /db_xref="GI:1814330"	941910141 /gene="ipt" /codon start=1	9419, .10141 /gene="ipt"	ment"		LRDVVGLYVDPPAHAIVLSVDEKSQIQALDRTQPGLPMKKGRLGTMTHDYKRHGTTTL FAALNVLDGTVJGCNMQBHRHQBFIRFLKRINAQAPDDKSVHVILDNYAAHKHPKVBA WLERHERFTFHFTPTSCSWLNAVEGFFARLSKRRLKRGVFHSVVDLQAAINRFLVEHN
D 4	2 B	Q B	Ş	B &	) B 4	S B 1	S & S	g 8	ν,	dg Qy	g, Db	γQ	ОУ	Qу	Дb	S	Qy Db	Db Qy	Db	Q	Db .5	Ş B	. Qy
TGAAGAAAATCAGCGGATGTGCTCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATC		6566 ACATGGAGTTTCCCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGC-GG 6624 1320 GTTTGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATA 1379	1260 ACATGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG 1319	6506 GAGTCGTTCTTCAGCGATAGAGAGGATCTTTCTGGGCTCGCATCCTCCCGGTGGTGAA 6565		6386 GGTTTCCTTGAGGGAGATATTGTGTTGGCTTCGCCTATGCTATCACTGAGGCCCTGAAA 6445	1081 GGTTTTCATGAGGGGATATTGTTGGGTTGGGCTTGGCCTATTACTGGGCCTTGAAA 1140	TITLE THE TITLE	961 CCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCCAATACATGTGGGAAAGCCGGG 1020	901 TICHGETTETTECTTCCTCGAGGGTTAGGGCCGTCTTCGATGAGGCCGTTCCCAAAT 500	TTCAAGGAAGCTCCGAGGCTCAAGGCCGAAATGGGAGCGATGCGATTTCCTTCC		781 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCT 840	721 GTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTA 780	5966 TGTTCCGATAGCGGTCGGATCGGCTTCTTCCCGGAAGGTGTTCCTAAGCCGAAAGTAGCG 6025	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCG 720	601 TCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAA 660	541 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 600	5786 CTGCAAATGGCGCCGTACGAAACGGCATGAAACGCGTTACTGGGTTTGCCATGACC 5845	481 CTGCCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGTTTACCATAACC 540	CCCAGCGACCTTAGTCATTTCCTGGCCATTTCAATTTCTGAGACTGCCCGCTCCCGAACC	5666 GATTTCTCCAGAGCACAACTTCTCCAAAATTCTGAATTTGCTGAGCGGCAAAAGATATGGA 5/25	361 GATTTCTCCGAAGCACCAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCA

Db 7225
Qy 1920
Db 7165
Оу 1860
Db 7105
Qy 1800
Db 7045
Qy 1740
Db 6985
Оу 1680
Db 6925
Оу 1620
Db 6865
Оу 1560
Db 6805
Оу 1500
Db 6745
Qy 1440

Search completed: November 24, 2003, 01:37:08 Job time: 8374.46 secs

THIS PAGE BLANK (USPTO)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                      Published_Applications_NA:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-434-837-10
2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2169961 seqs, 1634102185 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        November 23, 2003, 19:44:15; Search time 701.748 Seconds (without alignments)
/cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/USO98_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atgtcagcttcacctctct.....actaccgcagtagaaattag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10562.608 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2268
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

16	15	14	13	12	11	10	9	8	7	6	<sub>(</sub>	4.	ω	2	ן	Result
39.6	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	1788	1788.6	2268	Score
1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	78.8	78.9	100.0	Query Match
1695	1049	1049	1049	1049	1049	1049	1049	1049	1049				1807	2544	2268	Query Match Length
14	15	14	12	12	12	12	12	12	12	12	12	12	14	14	14	BIG
US-10-156-761-6871	US-10-146-731-358	US-10-123-155-358	US-10-141-759-358	US-10-141-756-358	US-10-140-923-358	US-10-140-864-358	US-10-140-805-358	US-10-137-871-358	US-10-158-790-358	US-10-142-885-358	US-10-141-761-358	US-10-140-472-358	US-10-187-339-7	US-10-187-339-9	US-10-187-339-10	ID
Sequence 6871, Ap	Sequence 358, App	Sequence 358, App	Sequence 358, App	•	Sequence 358, App	•	Sequence 358, App	•	Sequence 358, App	-	Sequence 358, App	Sequence 358, App	Sequence 7, Appli	Sequence 9, Appli	Sequence 10, Appl	Description

			a							O	ი		O	ი		Ω	Ω					Ω				a		
4.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	۲,
34	ա 4-	34	34	34.4	34.4	34.4	34.4	34.4	34.4	34.6	34.6	35	35.2	35.2	35.6	35.6	35.6	36	/ 36	36	36.2	37	37	37	37.4	37.4	38.6	09.0
<u>-</u> ։	<u>-</u> 5	1.5	1.5	1. 5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	۲.
1572	58 5	585	585	11745	2291	2291	2192	2188	2180	5068	4996	368004	1032	1032	3.7322	3055	3055	1578	671	671	3758	161652	1007	1007	29555	7194	1575	2022000
14	ü	12	12	12	12	12	12	14	14	12	12	10		. 9	12	13	12	10	14	14	11	15	13	12	8	9		F
US-10-230-026-29	US-10-027-632-217634	US-10-027-632-217634	US-10-032-585-6692	US-10-240-453-205	US-10-320-351-17	US-10-320-351-16	US-10-240-965-134	US-10-103-313-86	US-10-168-274-30	US-10-301-822-164	US-10-301-822-166	US-09-949-654-3	US-09-415-277A-6	US-09-415-277A-4	US-09-873-367C-333	US-10-027-632-177179	US-10-027-632-177179	US-09-880-107-3440	US-10-184-634-346	US-10-184-644-346	US-09-948-820-42	US-10-081-327-40	US-10-027-632-10540	US-10-027-632-10540	US-08-781-986A-206	US-09-815-242-8167	US-09-912-176-2	COLFOLICAL
		Sequence 217634,	6692,	205,	-	16,	134	86,		Sequence 164, App	166	Sequence 3, Appli	,	Sequence 4, Appli	Sequence 333, App	Sequence 177179,	Sequence 177179,	3440,	346	346,	42,	Sequence 40, Appl	Sequence 10540, A	Sequence 10540, A	Sequence 206, App	Sequence 8167, Ap	Sequence 2, Appli	acduence t' white

## ALIGNMENTS

```
Ś
                                                                          В
                                                                                                            Ş
                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                    ; TYPE: DNA ; ORGANISM: Agrobacterium tumefaciens US-10-187-339-10
                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-187-339-10
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-11-05
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10, Application US/10187339
Publication No. US20030084478A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                       Matches 2268; Conservative
                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/187,339
CURRENT FILING DATE: 2002-06-28
PRIOR APPLICATION NUMBER: US/09/434,837
PRIOR FILING DATE: 1999-11-04
PRIOR APPLICATION NUMBER: 60/107,185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ream, Walt et al.,
TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and
TITLE OF INVENTION: Methods and Compositions for Producing the
FILE REFERENCE: 53629
                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 2268
                  121 CGAGAAGCTTCTAGGGGAAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
121
                                                                          61
                                                                                                   61 CTGACAATGGTCGATAAGGCGGATGAATTGGAACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
                                                                                                                                                                              1 ATGTCAGCTTCACCTCCTCGATAACCAGTGCGATCATCTCCCAAACCAAAATGGTGGAT 60
                                                                          CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA
                                                                                                                                                                                                                                  100.0%; Score 2268;
100.0%; Pred. No. 0;
rative 0; Mismatches
                                                                                                                                                                                                                                                                            DB 14;
                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                          Length 2268;
                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Same
                                                                                                                                                                                                                                    Gaps
                                                                          120
                                                                                                                                                                                               60
```

1201 GAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGGCACACATCCTCCTGGTGGTAAA 1260	191 CCTTGCMANAGCTGGCCGATGGTCGCTTCCCGAAACTCTCACCTGGTGGAAAGGTACCAA 291 GTCTTCTCCCGCTTATATCTATATTGGTGAAAGGTTCCCCGAAAAAATCTCTGGGGGGGATACCTAAAGTTCTCTCCGAAAGGTTGCCCGAAAGAAA
RES US- ; S ; G	
RESULT 2 US-10-187-339-9 US-10-187-339-9 ; Sequence 9, Application US/10187339 ; Publication No. US20030084478A1 ; GENERAL INFORMATION:	1261 CARGAGRITHICCICAGARICAGARITA CONTROLAGARITAGARITCOGGARITAGARITCAGARITCOGGARITAGARITCAGARITAGARITAGARITAGARITAGARITAGARITCAGARITCOGGARITAGARITCAGARITA

밁 δ 음 성 B Ś 밁 ર્ 밁 Ş g 5

8 8 8 8

밁 5 밁 S 음 성 日 8 뮍 र् 밁

중 음 중

음 성 음

5

음 성

QY 732 TGGCATTICCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC 791	QY 672 TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC 731	QY 612 CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG 671	QY 552 CGTGCCATTTGACATGGTAGCTTATGGTCGAAAACCTGATGCTGAAGGGTTCGGCAGGTTC 611	QY 492 GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC 551	QY 432 TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC 491	Qy 372 AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT 431	QY 312 GGCAACAGTGAGTGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA 371	Qy 252 TTATATCTATATTGGCAAAGAAATTCTGGGGGGGGATACTTGAATCGAAACCTTGGGGGGGG	Qy 192 GCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC 251	QY 132 TAGGGGAAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG 191	Qy 72 CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC 131	GTGCGATCATCTCCCAACCAAAATGGTGGATCTGAC; 	Query Match 78.9%; Score 1788.6; DB 14; Length 2544; Best Local Similarity 99.8%; Pred. No. 0; Matches 1791; Conservative 0; Mismatches 4; Indels 0; Gaps 0;	; LENGTH: 2544 ; TYPE: DNA. ; ORGANISM: Agrobacterium tumefaciens US-10-187-339-9	PRIOR FILING DATE: 1998-11-05 ; NUMBER OF SEQ ID NOS: 12 ; SOFTWARE: Patentin Ver. 2.0 ; SEQ ID NO 9	CURRENT FILING DATE: 2002-06-28 ; PRIOR APPLICATION NUMBER: US/09/434,837 ; PRIOR FILING DATE: 1999-11-06 ; PRIOR APPLICATION NUMBER: 60/107,185	; APPLICANT: Ream, Walt et al., ; TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and ; TITLE OF INVENTION: Methods and Compositions for Producing the Same ; FILE REFERENCE: 53629
RESULT 3 US-10-187-339-7 ; Sequence 7, Application US/10187339	OY 1752 CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAAGGATCGGAATGGT 1806	1692 CCTGATGACGAAAATTCTGGTTAGACGATATCCTCCCGTCTTGTGTCCTCATGG	1632 TCAGGCACCAGTGAACACCGCTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT 1	1572 CACATCTGGAATATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTT 16	1512 GACAAAATAAGGATAAGGCTTAAGAGCCGGATATCTGAACTTTATGATAAGGTGGTGGT 1	1452 GGTGTGTGTGAGCCAGGGCATATGCCATGTTCAAGTCAGGGCATTCAGAAGGAAAA 15	1392 GGGATIGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGCATCGCATCTGAAGTGGTTAA 1	1532 11 19AANGCGGG111A1 19AGA1 CCICCGCITGGICAICAACGGAIAIGAAGAAAATCA 1	1272 CCTCATGATTGGGACCTATTCAAGCTAATGGAATAGGATTGGCGGGGTTTGGTCCAGT	1212 TCAGGGATAGAGAGGATCTTTCTGGGCACAGTCCTCCTGGTGGTAAACATGGAGTTTT 1	1132 IAGGIGGCICATGACITCIGGCAAAITIGGCIGAACCGITICGGGAGGGAGTCCITCIC 1	1092 GCGAGATATTGTGTTGGCTTTCGCCTGTCGCTATTACTCACGCCTTGAAATCAGGACACAT 1	GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA	972 CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC 1 	Qy 912 TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT 971	Qy 852 TCCTAGTGTCGTGGCCGAAATGGGGGGGGATTTCCTCCTGCTGCATTCTGCTTGTT 911	Qy 792 AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC 851

```
GENERAL INFORMATION:
APPLICANT: Ream, Walt et al.,
TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and
TITLE OF INVENTION: Plants Having Enhanced Gall Resistance and
TITLE OF INVENTION: Methods and Compositions for Producing the Same
FILE REFERENCE: 53629
CURRENT PRILIAGION NUMBER: US/10/187,339
CURRENT FILING DATE: 2002-06-28
PRIOR PPLICATION NUMBER: US/09/434,837
PRIOR APPLICATION NUMBER: US/09/434,837
PRIOR FILING DATE: 1999-11-04
PRIOR FILING DATE: 1998-11-05
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 7
LENGTH: 1807
TYPE: DNA
ORGANISM: Agrobacterium tumefaciens
US-10-187-339-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                              δ
                                                                                 吊
                                                                                                      δ
                                                                                                                                 문
                                                                                                                                                               & & &
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઈ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 78.8%; Score 1788; 1
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1788; Conservative 0; Mismatches
                                                                                                                                                                                                     498
                                                                                                                                                                                                                                492
                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                        432
                                                                                                                                                                                                                                                                                                                      378
                                                                                                                                                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      138
732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCCGCAGGTTC
                                                                                                                                                                                                                         GCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTTGAAGGGGC
                                                                                                                                                                                                                                                             TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC
                                                                                                                                                                                                                                                                                  TAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTGCCAATGCC
                                                                                                                                                                                                                                                                                                                     AGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAGATGTGCACCGATTGATCT
                                                                                                                                                                                                                                                                                                                                                                                            GGCAACAGTGAGTGGTCTCGTTGCCATCGACTTGGACACCATTTGCATGGATTTCTCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAGGGGAAGGAGTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGGGGAAGGAGTTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCTTGCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGAGAAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCTCCTTGATAACCAGTGCGATCATCTCCCAACCAAAATGGTGGATCTGACAATGGT
TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC 791
                           TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                          TGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGC
                                                                                     CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                     CTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAG
                                                                                                                                            CGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCGGCAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCTTGGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGCCGATGGTCGCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTTCTCTCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1807;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131
                         737
                                                                                    677
                                                                                                                                                                        611
                                                                                                                                                                                                                                  551
                                                                                                                                                                                                                                                              497
                                                                                                                                                                                                                                                                                          491
                                                                                                                                                                                                                                                                                                                                                 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77
                                                                                                               671
                                                                                                                                            617
                                                                                                                                                                                                     557
                                                                                                                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                                                                                                                                377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                               S
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
RESULT
                                        음 성
                                                                                                밁
                                                                                                                     Ş
                                                                                                                                                        В
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                  В
                                                                                                  1698
                                                                                                                                                           1638
                                                                                                                                                                                                                    1578
                                                                                                                                                                                                                                                                                                                                     1458
                                                                                                                                                                                                                                                                                                                                                                 1452
                                                                                                                                                                                                                                                                                                                                                                                             1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1098
                                                                                                                                                                                        1632
                                                                                                                                                                                                                                               1572
                                                                                                                                                                                                                                                                            1518
                                                                                                                                                                                                                                                                                                                                                                                                                        1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1038
                                                                                                                              1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                798
                                                                                                                                                                                                                                                                            GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGCTGTTCCATCGCGTTTTACAACGGTTGGCGTTCCTTGAAGGACGGTTTTCCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCAAATCCCGGCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTAC
                                                            CGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCC 1799
                                                                                                                  CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA
                                                                                                                                                           TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                           TCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTT
                                                                                                                                                                                                                    CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                     CACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTT
                                                                                                                                                                                                                                                                                                                                                   CGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA 1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGAAACATGGAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGGGATAGAGAGCTTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTT
                                                                                                   CCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGA
                                                                                                                                                                                                                                                                                                                                    CGGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                             GCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGT
                                           1805
```

1637

1631 1577 1571 1517

1697 1691 1457

1391

1337

1277

1271

1217 1211 1037 1031

```
S
                                                                         밁
                                                                                                         Ş
                                                                                                                                                    밁
                                                                                                                                                                              δ
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-140-472-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/140,472
CURRENT FILING DATE: 2002-05-06
Prior Apploication removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 1.8%; Score 40.8; DB 12; Best Local Similarity 5.4%; Pred. No. 0.028; Matches 38; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 358, Application No. US20 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo Sapien
-10-140-472-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                    1018
778
                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL 837
                                  AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGGCC 1017
                                                                                                                                                                                                                                                                      GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                            FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                            GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                         LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                          GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCA 957
                                                                                                                                                                                                                                 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                 GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                       KNKEASFMSVNESCYKYGOTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                  SKNSLSFLPSGVFDGMPPNLKNLSLÅKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
Gurney, Austin L.
Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumas, Daniel
Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10140472 b. US20030138888A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                  1077
                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             357
                                                                           777
                                                                                                                                                                                                                                                                                                                                                   837
                                                                                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           717
```

```
밁
                             Ś
                                                                        밁
                                                                                                     δ
                                                                                                                                            밁
                                                                                                                                                                               Ś
                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo US-10-141-761-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-141-761-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Baker, Ke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 358, Application US/10141761 Publication No. US20030148432A1
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/141,761
CURRENT FILING DATE: 2002-05-08
Prior Application removed - See Palm or File
NUMBER OF SEQ ID NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Watanabe, Colin K
APPLICANT: Wood, William
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1078 GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                        478
                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                  298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                     538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1049
                                                                                                                                                                                                                                                                                                                                                                        th 1.8%; Score 40.8; DB similarity 5.4%; Pred. No. 0.028; Similarity 5.4%; Pred. No. 0.028; Mismatches ...
FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                   GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                  KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF 477
                                                                                                                                                                                   CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                        ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                             GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG 1197
                                                                        KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                             GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sapien
                                                                                                                                                                                                                                                                                                                                                                                                           DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wrapper
                                                                                                                                                                                                                                                                                                                                                                          473;
                                                                                                                                                                                                                                                                                                                                                                                                             Length 1049;
                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                          <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                     837
                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                  357
                                                                        537
                                                                                                             777
                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1137
                                                                                                                                                                                     717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      897
                                                                                                                                                                                                                                                                                                                                                                            0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
US-10-142-885-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                  밁
                                                                  Ś
ફ
                                                                                                                                                                          LENGTH: 1049
TYPE: PRT
ORGANISM: Homo Sapien
US-10-142-885-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Mauree
APPLICANT: DeForge, Laura
APPLICANT: Desnoyers, Luc
APPLICANT: Filvaroff, Ellen
APPLICANT: Gao, Wei-Qiang
                                                                                                                                                                                                                                        Prior Apploication removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
                                                                                                      Query Match 1.8%; Score 40.8; DB 12; Best Local Similarity 5.4%; Pred. No. 0.028; Matches 38; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 358, Application US/10142885 Publication No. US20030157604A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                              CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                              FILE REFERENCE: P3330R1C248
CURRENT APPLICATION NUMBER: US/10/142,885
                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1198 AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   838 GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
   598
                                   298
                                                                     538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     958 TDKYAKTENFKIAFYLSHORLMDEKVDVIILIFLEKPFOKSKFLOLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGUNRYLQLFKNLLKLEELDI 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA 957
 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC 657
                                   HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNLILESLSISVSLELMVMYTASHLYFWDVWYIYHECKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                    Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                      Watanab
                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                  be, Colin K
                                                                                                                                                                                                                                                                                                2002-05-10
                                                                                                         Indels
                                                                                                                                        Length
                                                                                                                                           1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1245
                                                                                                       0
                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               837
                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
```

```
1078
                                                   1198 AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                        1018
                                                                                                                                                                   1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FOPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFOSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                       TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                        LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                              GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                    LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                             DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                 1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        777
                                                                                                                        957
                                                                                                                                                                                                                                   897
                                                                                                                                                                                                                                                                                                                                             837
                                                                                                                                                                                                                                                                                                                                                                                                                                                       777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   897
```

US-10-158-790-358 GENERAL INFORMATION Sequence 358, Application US/10158790 Publication No. US20030180879A1 APPLICANT: Zhang, Zemin TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C448
CURRENT APPLICATION NUMBER: US/10/158,790
CURRENT FILING DATE: 2002-05-30
Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550 APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: Baker, Kevin P. Tumas,Daniel Watanabe,Colin K Stewart, Timothy A Smith, Victoria Sherwood, Steven Godowski, Paul J. Gurney, Austin L. Goddard, Audrey Gerritsen, Mary E Gao, Wei-Qiang Filvaroff, Ellen Desnoyers, Luc DeForge, Laura Beresini, Maureen Wood, William

```
RESULT 8
US-10-137-871-358
                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-158-790-358
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maurae
APPLICANT: DeForge, Laura-
APPLICANT: Desnoyers, Luc
APPLICANT: Desnoyers, Luc
APPLICANT: Filvaroff, Eller
APPLICANT: Gao, Wei-Qiang
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul;
                                                                                                                                                                                       Sequence 358, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1018
                                                                                                                                                                                                                                                                                                                                          958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             598 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TNLILESLSISVSLELMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                    AGGGAGTCCTTCTCCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                            DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATTCTGCTTGTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                       Gao, Wei-Qiang
Gerritsen, Mary E.
                                                                               DeForge, Laura
Desnoyers, Luc
Filvaroff, Ellen
Goddard, Audrey
Godowski, Paul
                                                                                                                                                 Beresini, Maureen
                                                                                                                                                                                                             Application US/10137871
o. US20030207350A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.8%; Score 40.8; DB 12; Length ilarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches 473; Indels
                                                                                                                                                                                                                                                                                                                                                                                    1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                           S
                                                                                                       유
                                                                                                                                             δ
                                                                                                                                                                                         В
                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-137-871-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C153
CURRENT APPLICATION NUMBER: US/10/137,871
CURRENT FILING DATE: 2002-05-03
Prior Application removed - See Palm or File Wrapper
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo Sapien
                                                                                                                                                                                                                                     1078
                                                                                                                                                                                                                                                                                                                    1018
                                                                                                                                                                                                                                                                                                                                                                                                      958
                                                                                                                                                                                                                                                                                                                                                                                                                                                  859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEBLDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                   TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                             AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                               ANATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                  GGGCAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCTTGAAG
                                                                                                                                                                                                                                                                                                                                                              LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                       DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                           TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                 GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                          LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGOSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                      AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sherwood, Steven Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.8%; Score 40.8; DB ilarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

837 537 717 417 357

1017 717 957 657

777

897

```
Pag 8
```

```
Ş
                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
US-10-140-805-358
                                      밁
                                                                                                                        밁
                                                                                                                                                       ঠ
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-140-805-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Apploication removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 1.8%; Score 40.8; DB 12; Best Local Similarity 5.4%; Pred. No. 0.028; Matches 38; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 358, F
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/140,805
CURRENT FILING DATE: 2002-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                               958 AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                 898 GCATTCTGCTTGTTTTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                          598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                        478 KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            418 KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                        SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                 GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                             FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                 GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/10140805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,,</u>
                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417
                                                                                                                           717
                                                                                                                                                                 957
                                                                                                                                                                                                                                                    897
                                                                                                                                                                                                                                                                                                                                                                            537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                357
```

```
Ş
                                                                              á
                                                                                                                            밁
                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
S
                                         밁
                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo Sapien US-10-140-864-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-140-864-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prior Application removed - See Palm or File Wrapper
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION: APPLICANT: Baker, Ke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 358, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/140,864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3330R1C184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     778 LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL 837
                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                             358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                                                                                                                298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR 357
                                                                                                                                                                                                                                                                                                                                         538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGGAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                           KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                  GCGGTCATTGGCGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                     CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                      GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DTKDPÄVTEWVLÄELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                            KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumas, Daniel
Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beresini,Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10140864 o. US20030207419A1
                                                                                                                                                                                                                                                                                                                                                                              1.8%; Score 40.8; DE llarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                          DB 12;
                                                                                                                                                                                                                                                                                                                                                                                  473;
                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      897
                                                                                                                                                                                                                                                                                                                                                                                  0
```

밁

5 밁 á 문 8

> 957 657 897

537

멼

S 밁 δ 밁 ð

ð

```
Prior Application removed - Se
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
US-10-140-923-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 358, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION
                                                                                                                             Query Match
                                                                                                                                                                         -10-140-923-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/140,923
CURRENT FILING DATE: 2002-05-07
                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: P3330R1C188
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                   Local Similarity
es 38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
    298
                                         538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           538
HSNSLOHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TDKYAKTENFKIAFYLSHORLMDEKVDVIILIFLEKPFOKSKFLOLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGAGTCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOKLMANDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TNLILESLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beresini,Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10140923

D. US20030207355A1
                                                                               1.8%; Score 40.8; DB 12; llarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                 See Palm or File Wrapper
                                                                                   Indels
                                                                                                                        Length 1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1245
                                                                                 0,
                                                                                   Gaps
  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-141-756-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION: APPLICANT: Baker, Ke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 358, Application US/10141756 Publication No. US20030207359A1
                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                              APPLICANT:
FILE REFERENCE: P3330R1C200
CURRENT APPLICATION NUMBER: US/10/141,756
CURRENT FILING DATE: 2002-05-08
                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                       APPLICANT:
                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598 GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                  Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGAGTCCTTCTCCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT 837
                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DTKDPÄVTEWVLÄELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                    Zhang, Zemin
                                                                                                                                                                                                                                                   Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                   Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                         Gao, Wei-Qiang
                                                                                                                                                                                      Stewart, Timothy A.
                                                                                                                                                                                                              Smith, Victoria
                                                                                                                                                                                                                               Sherwood, Steven
                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                             Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                    DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                        Beresini, Maureen
                                                                                   POLYPEPTIDES
```

S

AND NUCLEIC

В

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                            US-10-141-759-358
                                                                                                                                                                                                                RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-141-756-358
APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Mauree
APPLICANT: DeForge, Laura
APPLICANT: Desnoyers, Luc
APPLICANT: Filvaroff, Ellen
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerritsen, Mary
                                                                                                                                 Sequence 358, Application No. US20 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior Apploication removed -
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 1.8%; Score 40.8; DB 12; Best Local Similarity 5.4%; Pred. No. 0.028; Matches 38; Conservative 197; Mismatches 473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418 KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                     Beresini, Maureen
DeForge, Laura
Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                        TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                                                                                                                                                                                                                                                                             TNLILFSLSISVSLELMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGAC
                                                                                                                                                                                                                                                                                                             AGGGAGTCCTTCTCCAGGGATAGAGAGGATCTTTCTGGGCACACAT
                                                                                                                                                                                                                                                                                                                                                   DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                         AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gao, Wei-Qiang
Gerritsen, Mary E
                                                                                                                                                        Application US/10141759
o. US20030207361A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                             1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1137
                                                                                                                                                                                                                                                                                                                                                     957
                                                                                                                                                                                                                                                                                                                                                                                                                               897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                           문
                                                                                             á
                                                                                                                                     밁
                                                                                                                                                                  S
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-141-759-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C197
CURRENT PILING DATE: 2002-05-08
Prior Apploication removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
LENGTH: 1049
TYPE: PRT
ORGANISM: Homo Sapien
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                       1198 AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                      1018
                                                                                                                                                                            1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                   865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                LILHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                             DTKDPÅVTEWVLÅELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                       TNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                      GGGCAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTGCGTTCTTGAAG
                                                                                                                                                                                                                                                                                              LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                                                                                                                                                                                                                                                                                                                   AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC
                                                                                                                                                                                                                                                                                                                                                                         SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                                                                                                                                                                                                                                                                                                           GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                        GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumas, Daniel
Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J.
Gurney, Austin L.
Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.8%; Score 40.8; DB ilarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches
     --
     DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                         897
                                                                                                                                                                                                                                                        1077
                                                                                                                                                                                                                                                                                                                                     1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 477
                                                                 957
                                                                                                                                                                                                                    837
                                                                                                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                                                                               957
                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    357
```

밁

958

TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005

```
Query Match
Best Local Similarity
Matches 38; Conserva
                               S
                                                                                                                  ş
                                                                                                                                                                                         δ
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                               ₽
                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         হ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-123-155-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-123-155-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prior Application removed -
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 358, Application US/10123155 Publication No. US20030068794A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMERANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maure
APPLICANT: DeForge, Laura
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/123,155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: P3330R1C30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 1049
718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPENVLNNLKM
                                       958 AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                      478 KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE 537
                                                                                                                                                                                                                                                                                                                                                                  718
                                                                                                                                                                                                                                                                                                                                                                                                                                           658 CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                           SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER
                                                                                                                  GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCCA
                                                                                                                                                          LOKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI
                                                                                                                                                                                                   GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGGCGATGCGATTTCCTCCTGCT
                                                                                                                                                                                                                                                                               GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT
                                                                                                                                                                                                                                                                                                                                                              GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                   KOFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPOVLEOLHYFRYDKYARSCRF 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                         FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DeForge, Laura
Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tumas, Danie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.8%; Score 40.8; DB 14; Length 1049; ilarity 5.4%; Pred. No. 0.028; Conservative 197; Mismatches 473; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   See Palm or File Wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                               717
                                                                                                                    957
                                                                                                                                                            657
                                                                                                                                                                                                   897
                                                                                                                                                                                                                                           597
                                                                                                                                                                                                                                                                                   837
                                                                                                                                                                                                                                                                                                                                                                777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                      Ş
                                                                                밁
                                                                                                                  á
                                                                                                                                                           밁
                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo Sapien US-10-146-731-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-146-731-358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 358
LENGTH: 1049
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 358, Application US/10146731 Publication No. US20030129692A1
                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/146,731
CURRENT FILING DATE: 2002-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: P3330R1C323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1198 AGGGAGTCCTTCTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1078 GACGGTTTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                               358 ASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLHNLQNLEVLDLGTNFIKIANLSMF 417
                                                                                                                                                                                                                                              298 HSNSLQHVPPRWFKNINKLQELDLSQNFLAKEIGDAKFLHFLPSLIQLDLSFNFELQVYR 357
                                                                                                                                                                                                                                                                                      538 ACCCTTGAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
KNKEASFMSVNESCYKYGQTLDLSKNSIFFVKSSDFQHLSFLKCLNLSGNLISQTLNGSE
                                        GCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGG 777
                                                                                                                       CAATGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTG
                                                                                                                                                                                                      GGTTCGGCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTTGGCTGAACCGTTTCGGG 1197
                                                                                KQFKRLKVIDLSVNKISPSGDSSEVGFCSNARTSVESYEPQVLEQLHYFRYDKYARSCRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLLHHNRFLCTCDAVWFVWWVNHTEVTIPYLATDVTCVGPGAHKGQSVISLDLYTCELDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNLILESLSISVSLELMVMMTASHLYFWDVWYIYHFCKAKIKGYQRLISPDCCYDAFIVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L. Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pilvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DeForge,Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Beresini, Maureen
                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                  1.8%; Score 40.8; DE 5.4%; Pred. No. 0.028;
                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                     DB 15;
                                                                                                                                                                                                                                                                                                                             473;
                                                                                                                                                                                                                                                                                                                                                                     Length 1049;
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                477
                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               897
```

```
1198 AGGGAGTCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACAT 1245
                                                                                                                                                                                                                                                         1138 AAATCAGGACACATTAGGTGGGCTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGG 1197
                                                                                                                                                                                                                                                                                                                                                                                                                                1078 GACGGTTTTCATGAGCGAGATATTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTG 1137
958 TDKYAKTENFKIAFYLSHQRLMDEKVDVIILIFLEKPFQKSKFLQLRK 1005
                                                                                                                                                                            898 DTKDPAVTEWVLAELVAKLEDPREKHFNLCLEERDWLPGQPVLENLSQSIQLSKKTVFVM 957
                                                                                                                                                                                                                                                                                                                                               838 TNLILESLSISVSLELMVMYTASHLYEWDVWYIYHECKAKIKGYQRLISPDCCYDAEIVY 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      778 LLLHHNRFLCTCDAVWFVWWVNHTEVTIFYLATDVTCVGPGAHKGQSVISLDLYTCELDL 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  718 LSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFDENVLNNLKM 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    958 AATCCCGGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCC 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          658 SKNSLSFLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQLTTVPER 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           898 GCATTCTGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCA 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598 LQKLMMNDNDISSSTSRTMESESLRTLEFRGNHLDVLWREGDNRYLQLFKNLLKLEELDI 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       838 GCTTTCAGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCT 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              538 FQPLAELRYLDFSNNRLDLLHSTAFEELHKLEVLDISSNSHYFQSEGITHMLNFTKNLKV 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               778 GTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACAT 837
```

음 성 음

ঠ

Search completed: November 23, 2003, 21:22:45 Job time: 709.748 secs

Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence

59, Appl 59, Appl 1, Appli 1, Appli 1, Appli 1, Appli 3, Appli 16, Appli 16, Appli 13, Appli 13, Appli 13, Appli 14, Appli 14, Appli 17, Appli 18, Appli 19, Appli 11, Appli 11, Appli 11, Appli 11, Appli

Sequence

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued_Patents_NA:*

1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-434-837-10
2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  November 23, 2003, 20:32:25 ; Search time 132.658 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atgtcagcttcacctctcct.....actaccgcagtagaaattag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
       GenCore version 5.1.6 (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DВ
6 5428147-1
3 US-09-073-587-2
3 US-09-08-216-8
1 US-08-08-259-8
1 US-08-459-569-19
1 US-08-459-569-19
1 US-08-459-569-19
2 US-08-458-831-19
3 US-09-103-840A-2
3 US-09-103-840A-1
1 US-08-665-037-1
2 US-08-665-037-1
2 US-08-665-037-1
3 US-09-415-277C-4
4 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-415-277C-4
5 US-09-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (without alignments)
7546.168 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ltd
Patent No. 5428147
Sequence 8, Appli
Sequence 8, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 8485, Appli
Sequence 8485, Appli
Sequence 8322, Appli
Sequence 8322, Appli
Sequence 8322, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8323, Appli
Sequence 8324, Appli
Sequence 8325, Appli
Sequence 8326, Appli
Sequence 8327, Appli
Sequence 8327, Appli
Sequence 8329, Appli
Sequence 832, Appli
Sequence 8329, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
Sequence 839, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                               5428147-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
5428147-1
                                                         밁
                                                                                        Ś
                                                                                                                                 В
                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                     ;SEQ ID NO:1:
LENGTH: 24595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PATENT NO. 5428147

APPLICANT: BARKER, RICHARI

TITLE OF INVENTION: OCTOP:

NUMBER OF SEQUENCES: 17

NUMBER OF SEQUENCES: 17

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . . . . . . . . . . . . . . . .
                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 2250; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/91
FILING DATE: 13-JUL-193
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 869,216
FILING DATE: 13-APR-1992
APPLICATION NUMBER: 869,216
FILING DATE: 13-APR-1992
APPLICATION NUMBER: 440,432
FILING DATE: 21-NOV-1983
APPLICATION NUMBER: 553,786
FILING DATE: 19-NOV-1983
APPLICATION NUMBER: 741,034
FILING DATE: 10-NOV-1983
APPLICATION NUMBER: 741,034
FILING DATE: 06-AUG-1991
APPLICATION NUMBER: 144,775
FILING DATE: 20-JAN-1988
APPLICATION NUMBER: 485,614
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 713,624
APPLICATION NUMBER: 713,624
FILING DATE: 10-JUN-1991
APPLICATION NUMBER: 260,574
APPLICATION NUMBER: 260,574
TTT-TNG DATE: 21-OCT-1988
                                                                                                                                                                                                                                                                                                                      FILING DATE: 21-OCT-1988
APPLICATION NUMBER: 848,733
FILING DATE: 01-APR-1986
APPLICATION NUMBER: 535,354
FILING DATE: 26-SEP-1983
ID NO:1:
                                                           5869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                              61
                                                                                                                                                                       ٢
CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTA 180
                                                       CTGACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAA 120
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER: 485,614
15-APR-1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            536165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RICHARD F.; KEMP, JOHN D. CTOPINE T-DNA PROMOTERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419
1764
1764
1764
17764
1770
1779
1779
1779
2631
2631
2631
2633
3253
3317
                                                                                                                                                                                                                            97.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/91,538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-015-968-59

US-09-197-386-59

US-08-642-684-1

US-09-157-397-1

US-09-157-397-1

US-09-157-021-1

US-09-157-021-1

US-08-042-684-3

US-08-208-036-16

US-08-208-036-13

US-08-208-036-13

US-08-208-036-13

US-08-10-215A-1

US-08-212-87-13

US-08-232-43-14

US-08-232-463-14
                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                              Score 2217.8;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALIGNMENTS
                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                              Length
```

Result No.

2217.8 2162.8 Score Pred. No. score grea and is der

Ω O a

0.0

24595; 2

Gaps

5928

5868 60 Minimum Maximum

DB DB

seq

Database

Title: Perfect score: Sequence:

Scoring table:

OM nucleic -

9:

9 9 9 9 9 9 9 9

1201 GAGTCCTTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AA 1259 	6829 CAGCTGCCACCGAAGCTGTTCCATCGCGTTTACAACCGTTGCGGCTCCTTGAAAGAACCGTTCTGAAAGAACCGTTCTGAAAGAACCGTTCTGAAAGAACAACCGTTGCCTTGAAAGAACAACCGTTTTCATGAACAACCGAAAATTTGGCTTGGCTTTGAAAAAAAA	1021 CAGCTGCCACGGAAGCTGTTTCCATCGCGTTTACAACGGTTGGCGTTCCTTGAAAGCAC 1080	81 GACGATGTTACAATATATGAAGCAAGTGATCGTGTTTGGAGGCAAGCTTTGGTCACATGCT 84	661 TGTTCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTTAGCCGAAAGTGGCG 720	41 CTTGAAGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGT 60	421 CCGATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACC 48	301 CCTTGGGCGCGGGCAACAGTGAGTGGTCTCGTTGCCATCGACCTTTGGACACCATTTGCATG 360	5929 CGAGAAGCTTCTAGGGGAAGGAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTA 5988  181 GCTTGCAAAAGGCTGGCCGATGGTCGCCTTCCCCCGAGATCTCAGCTGGTGGAAAGGTAGCA 240  [
RESULT 2 US-09-073-587-2 ; Sequence 2, Application US/09073587	Oy  2160 CGCGTGTAACGCCGTTCGTACACACATTGTGGAGGCATTTTGGCAAAGGCAA 2219	7788 ACATGATTAGCATTACCAGAACTATTCAAGCACGAGGAGCACTTCAACCAGACGCAGGTGAGAACTATTCAAGCACGAGGAGTGATACCAGAGAACTATTCAAGCACCTGGACACCAGGCAATGATACCGGAGTAGAGAACTATTCAAGCACCTGGACACGGCTAATGATACCGGAGTAGAGAACTATTCAAGCACTGGACACGGCTAATGATACCGGAGTAGAGACTTTTATTCTTGAAGAACTTTTCAAGCACTGGACACGGCTAATGATACCGGAGTAGAGACTTTTATTCTGAAGAACTTTTCAAGCACTGGACACGGCTAATGATACCGGAGTAGACACTGGACACGGTGGATGGCTATTCAGACTATTCAGACTGGATGGA	7668 GGCGGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCCGGGACGCAATTTCCAGATCTTT 1920 CCCGGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCA	7548 TGTCC 1800 GAATG               7608 GAATG 1860 GGCGG		1500 TCACA 7308 TCACA 7308 TCACA 1560 TAAGG               7368 TAAGG	BU TGAAGAAATCAGCGGATGTGCCCTGAAGGAACTTCCAGATCTCGATCGGATCTGCAGTCGGATCTGCAGTCGGATCTGCAGTCTGAAGGAACTTCCACGTCGGATCGCATCTGAAGGAACTTCCACGTCGGATCGCATCTGAAGGAAAATCAGCGATCTGCAAGTCAGGGGGGATCTGAAGGGAAGTGGTTAACGGTGTGTGT	1260 ACATGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGG

```
; NAME/KEY:
; LOCATION:
US-09-073-587-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 33,878
REFERENCE/DOCKET NUMBER: 4-97
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 499-8080
TELEFAX: (303) 499-8089
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 2211
                                                                                                                                                                                                                                                                                                                                                                                       Query Match 95.4%;
Best Local Similarity 99.4%;
Matches 2192; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/045,725
FILING DATE: 06-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Ferber, Donna M.
REGISTRATION NUMBER: 33,878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HYPOTHETICAL:
ANTI-SENSE: N
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Greenlee,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Li, Yi
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: DN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 5370 MG
CITY: Boulder
STATE: Colorado
COUNTRY: US
ZIP: 80303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 06-MAN
                 301
                                              364
                                                                                                          304
                                                                                                                                         181
                                                                                                                                                                      244
                                                                                                                                                                                                     121
                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                   GAAGCTTCTAGGGGAAGGATTACTCAAAGCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                TTCTCCGAAGCACAACTAATCCAAGCCCTGTTTTTGCTGAGCGGTAAAAAGATGTGCACCG 423
                                                                                                                                                         CTCTCCGCTTATATCTATATTGGCAAAGAAATTCTGGGGCGGATACTTGAATCGAAACCT
                                                                                                                                                                                                                     TGCAAAAGGCTGGCCGATGGTCGCCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                               GAAGCTTCTAGGGGAAGGATTACTCAAATCTCCACCGAGTGCAGCGCTGGGTTAGCT
                                                                                            TGGGCGCGGCAACAGTGAGTGGTCTCGTTGCCATTGGACTTGGACACCATTTGCATGGAT
                                                                                                                                       TGCAAAAGGCTGGCCGATGGTCGCTTCCCCGAGATCTCAGCTGGTGGAAAGGTAGCAGTT
                                                                                                                                                                                                                                                                                                                           ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                                                                                                                                                                                                                                                ACAATGGTCGATAAGGCGGATGAATTGGACCGCAGGGTTTCCGATGCCTTCTTAGAACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2211 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5370 Manhattan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Greenlee, Winner and Sullivan, 70 Manhattan Circle, Suite 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transgenic Seedless
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09/073,587
                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                         Score 2162.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plants
                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                         2211;
                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                         363
                                                                          300
                                                                                                                                       240
                                                                                                                                                                     303
                                                                                                                                                                                                   180
                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                             В
                                                        Ś
                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                         Вþ
                                                                                                                    Ś
                                                                                                                                                                                Ś
                                                                                                                                                                                                                  멼
                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                              멹
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                               1263
                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                        1144
                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1024
1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424
GAAGGAAAAGACAAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAA 1562
                                                                                                                                                                                                                                                                                                                                                          TGGTCCAGTTTTTGAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGA 1382
                                                                                                                                                                                                                                                                                                TCCTTCTTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT-AAACA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                       TTTCATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCA 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCGATAGTGGACGGATCGGCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTGCAGACCGTTTTTTTGACCAATGT
                             AGTGGTTAACGGTGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA
                                              AGTGGTTAACGGTGTGTGTGTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCA 1502
                                                                                       AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA
                                                                                                            AGAAAATCAGCGGATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGA 1442
                                                                                                                                                                                                                                            TGGAGTTTTCCTCATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTT
                                                                                                                                                                                                                                                                              TCCTTCTCTCAGGGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGAAACA
                                                                                                                                                                                                                                                                                                                                           CTGCCACCGAAGCTGTTCCATCGCGTTTACAACGGTTGGCGTTCTTGAAGGACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCACAGTCGACACTTACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTTGTTTTTCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCTTGTTTTTCCTTCCTCGAGCGTTACGGCCTGTCTTCGATGAGGCCGGTTCCCCAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGTTACAATATATGAAGCAAGTGATCGTGTTTGGAGGCAAGCTTTTGGTCACATGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAATGCCGCTGTACGAGAATGGCATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGGCTTTCGAACCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                      TTCTATGAGCGAGATATTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGACGCTCCTAGTGTCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGGTTCCTTTCCAACAATCGACTTGCTCTACGACTACAGACCGTTTTTTGACCAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGGGCCGTGCCATTTGACATGGTAGCTTATGGTCGAAACCTGATGCTGAAGGGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAATGCCGCTGTACGAGAATGGCACGATGAAATGCGTTACCGGGTTTACCATAACCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGATCTTAGTCATTTCGTGGCCATTTCAATCTCTAAGACTGCCGGCTTTCGAACCCTG
                           1439
                                                                                         1379
                                                                                                                                                    1319
                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                               1322
                                                                                                                                                                                                                                                                                                                                                                                                       1080
                                                                                                                                                                                                                  1259
                                                                                                                                                                                                                                                                                                                                          1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
```

В δ 밁 δ 밁 Ś 당 S

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                            RESULT 3
US-08-008-216-8
                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                            Sequence 8, Application Patent No. 5366887 GENERAL INFORMATION:
              COUNTRY: USA
ZIP: 92101-4297
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                        APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: GRAY, CARY, AMES & FRYE
                                                                                                                  CITY: San Diego
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1683
                                                                                                                                                                                                                                                                                                                                                                                                 2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2040
                                                                                                                                                                                                                                                                                                                                                                                                 TCTCGAACACTCTTGGAAGAGATATAACTACCGCACTAGAAATTAG 2205
                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCGAACACTCTTGGAAGAGATATAACTACCGCAGTAGAAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTTGGCAAAGGGCAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGATTGGCTTACAGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGATTGGCTTACAGACGAGAATGCCGGGGGGAGCTTTCAAACTCAACCGGCGTGGTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCCCCGACAAAAAAGAGCGATTATGTCTGCTGCCGGGACGCAATTTCGAGATCTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGTAAAGGTCTAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGCCGCAGGATCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCATGGACGGGATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAACTCTTCCTGATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATATTTTTCAGGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTGGTGGTCACATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTAACGCCGTCTGTGCAATTATCCACAATTGTGGAGGCATTTTGGCAAAGGGCAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTGGCGGGTTGCAGTTGTTCCTTCACAGGTGGATGGGTGGAGGGTGCTATTCAGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTTATTCTGAAGAACTTTTCTTTCAAGCACTGGACACGGCTAATGATACCGGAGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCGTTTGCCCAGCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAACA
                                                                                                                                                       401 B Street,
PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                               US/08008216
                                                                                                                                                         Suite 1700
 Version
 #1
                                                                                                                                                                                                                                                                                                                                                                                                                                   2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1682
                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                   문
                                                                                Ś
                                                                                                                       몽
                                                                                                                                                  Ś
                                                                                                                                                                                         밁
                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-008-216-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: P102
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 699-2700
TELEPHAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 2279 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/
FILING DATE: 25-JAN-1993
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 06/
FILING DATE: 22-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: 1
ORIGINAL SOURCE:
ORGANISM: Agro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMEDIATE SOURCE:
LIBRARY: Convolvulus
CLONE: Clone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature LOCATION: 1..279
OTHER INFORMATION: /labe
OTHER INFORMATION: /note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid STRANDEDNESS: double TOPOLOGY: linear
                                                                                                                       1025
                                                                                                                                                                                                                                                                 905
                                                                                                                                                                                                                                                                                               098
                                                                                                                                                                                                                                                                                                                                 845
                                                                                                                                                                                                                                                                                                                                                                   803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                         980
                                                                                                                                                                                                                           920
                                                                                                                                                                                                                                                                                                                                                                                                   785
                                                                                                                                                                                                                                                                                                                                                                                                                          743 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             683 GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         665 TIGACCIGOGGIACGACIAICAGGITTICCICCAGGAGIGOGATGCCCAIGAIGGIGIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           623;
TTGTGTTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                       CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                               TCGTGGCCGAAATGGGGGCGATGCGATTCCTCCTGCTGCATTCTGCTTGTTTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                     TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                         ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                             TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                             CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                                                                                                                                                 GCCTTGTTGCCGCCACAGAACTACTTGGCGCGTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                     TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                           TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAC
                                                                                                                                                                                                                                                                                                                               CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strain A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Agrobacterium rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.0%;
45.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= ORF8
/note= "Sequence ORF8
through 8888 of Seq. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/008,216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arvensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06/725,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 136.4; DB 1; Pred. No. 8.7e-37; 0; Mismatches 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ID No. 5366887 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 o bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                     1159
                                                                                                                                                           1039
                                                                                                                                                                                               1024
                                                       1144
                                                                                         1099
                                                                                                                           1084
```

```
GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: GRAY, CARY, AMES & FRYE
STREET: 401 B Street, Suite 1700
CITY: San Diego
STATE: California
                                                                                                                                                                                                                                                         RESULT 4
US-08-459-569-8
                                                                                                                                                                                                                 Sequence 8, Application US/08459569 Patent No. 5543501
                                                                                                                                                                                                                                                                                                                                             1978
                                                                                                                                                                                                                                                                                                                                                                                     1936
                                                                                                                                                                                                                                                                                                                                                                                                                                 1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1145 GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                             CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT 2015
                                                                                                                                                                                                                                                                                                                                                                                   CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTCACGAAGCAAAAGTTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argactgaacgaaaatrcrggrragaccatatccrcccgrctrgrgrccrcatgacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCCTTTCCTGAACTGGCTTGT 1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAGAGCGATTATGTCTGCCGGGGGGGCGCAATTTCGAGATCTTTCCCGGCGTTTTGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG 1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCCGACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTCTGTGAGCCAGCGCATATGCCATGTTÇAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1275
                                                             S
                                                                                                                                                                                                                               Ş
                                                                                                       밁
                                                                                                                                               Ś
                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-459-569-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: 1.2279
OTHER INFORMATION: /label= ORF8
OTHER INFORMATION: /note= "Sequence ORF8 corres
Patent No. 5543501
OTHER INFORMATION: through 8888 of Seq. ID No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Sim
Matches 623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (619, TELEFAX: (619, TELEFAX: 100: 8
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
1 FRIGHTH: 2279 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 530
PRIOR APPLICATION UNMBER: US 08/
APPLICATION NUMBER: US 08/
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORWATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN: Strain IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLONE: Clone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIBRARY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                        965
                                                                920
                                                                                                          905
                                                                                                                                                 960
                                                                                                                                                                                           845
                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                                                                                 725
                                                                                                                                                                                                                                                                                                                                                                                                           683
                                                                                                                                                                                                                                                                                                                                                                                                                                                   665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                    TCGTGGCCGAAATGGGGGCGATGCGGATTTCCTCCTGCTGCATTCTGCTTGTTTTTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                                                                                                                                                 GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                         GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                             TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT 979
                                                                                                                                                                                           CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                   CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                                                                                                                                                                                                             GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                                                                                                                                                                                                                                                                GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                        TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Strain A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Convolvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.0%;
45.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/008,216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/459,569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arvensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 136.4; DB 1;
Pred. No. 8.7e-37;
0; Mismatches 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      corresponds to bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5543501 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                          964
                                                                                                                                                 919
                                                                                                                                                                                           904
                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                               844
                                                                                                                                                                                                                                                                                                                                                               784
                                                                                                                                                                                                                                                                                                                                                                                                           742
                                                                                                                                                                                                                                                                                                                                                                                                                                                   724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             682
```

S 밁 á 밁 S 밁 S

밁 ঠ 밁 Ś

밁

Ś

밁 δ 밁 δ 밁 8 밁 á

밁

δ 밁 δ 밁 S

#

```
RESULT 5
US-08-458-831-8
; Sequence 8, Application US/08458831
; Patent No. 5824866
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                 S
                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                          1918
                                                                                                                                                                                                                                                                    1858
                                                                                                                                                                                                                                                                                                                                                                                                                      1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1145
                                                                                                                                                                                                                                                                                                       1816
                                                                                                                                                                                                                                                                                                                                          1804
                                                                                                                                                                                                                                                                                                                                                                                                                                         1696 ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1276 ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1396 ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1040 rccarcecerracaaceerreecerecerrereaaeeaceerrereaeceaeara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                     CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT 1973
                                                                                                                                                                                                                                                                                                                                                                         ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA 1815
                                                                                                                                                                                                                                                                                                                                                                                                                    GTCACGAAGCAAAAGTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTTGACCAGGTCATCATTGGC
                                                                                                                  CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT
                                                                                                                                                                                                                             AAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCCGGCGTTTGCCCAG 1935
                                                                                                                                                                                                                                                                    GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG
                                                                                                                                                                                                                                                                                                     GTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                                                                                                                                                                                                                                                                                                            CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGGACTCGCAAATATCCAACTCAGGCATTGCCCTGACATGCGGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                          AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCTGCTTTCCTGAACTGGCTTGT
                                                                                                                  2015
                                                                                                                                                                                                                                                                                                                                            1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1099
                                                                                                                                                                                                                                                                    1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1039
                                                                                                                                                                                                                                                                                                                                                                                                                      1803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1159
                                                                                         Ş
                                                                                                                                                                 Ś
                     S
                                                        밁
                                                                                                                                В
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                US-08-458-831-8
                                                                                                                                                                                                                                                                                                                                                                           FEATURE:

NAME/KEY: misc_feature

LOCATION: 1..2279

LOCATION: 1..2279

OTHER INFORMATION: /label= ORF8

OTHER INFORMATION: /note= "Sequence ORF8

Patent No. 5824866

OTHER INFORMATION: through 8888 of Seq.
                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: Slightom, Jerry L.

APPLICANT: Tepfer, David A.

TITLE OF INVENTION: Ri T-DNA Promoters

NUMBER OF SEQUENCES: 19

CORRESPONDENCE ADDRESS:

ADDRESSEE: GRAY, CARY, AMES & FRYE

ADDRESSEE: GRAY, CARY, AMES & FRYE
                                                                                                                                                                                                                                                                                      Matches 623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 08/008
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
NAME: BATHDOTEL, MATRIE W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P102
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1099-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: DNA (90 ORIGINAL SOURCE: ORGANISM: Agrobacte STRAIN: Strain A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TEM PC COMPATION DATA
SOFTWARE: PATENTION DATA:
APPLICATION NUMBER: US/08/458,831
APPLICATION NUMBER: US/08/458,831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 40.
STREET: San Diego
CITY: San Diego
CTATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMMEDIATE SOURCE:
LIBRARY: Convo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIBRARY: Convolvulus arvensis
CLONE: Clone 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                          785
                                                                                                                                    725
                                                                                                                                                                                                            665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92101-4297
CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
                                                                                 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                           GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                            TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCCGATGCCCATGATGGTGTGG
                                                                                                                                                                                                                                   TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                          ĠĊĊŦŦĠŦŦĠĊŦĠĊĊĂĊĄĠĂĂĊŦĂĊŦĬĠĠĊĠĊŦĠĠĊĠŦĊĄĂĠĠĂĄĄŤĊĂĊŦĊŦŦŤŦĊĠĂŦĄ
                                                                                                                                    GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2279 base pairs
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Agrobacterium rhizogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-JUN-1995
                                                                                                                                                                                                                                                                                    6.0%; Score 136.4; DB 1;
45.9%; Pred. No. 8.7e-37;
ative 0; Mismatches 721;
                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Sequence ORF8 corresponds to bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 08/008,216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/458,831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , AMES & FRYE
Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06/725,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cells
                                                                                                                                                                                                                                                                                                                                                                               ID No.
```

Indels Length

14;

Gaps

844 802

784 742 724 682

859

5824866

```
1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1325
  1918
                                                1876
                                                                                                                                                 1816
                                                                                                                                                                                                  1804
                                                                                                                                                                                                                                                                                                                                               1696
                                                                                                                                                                                                                                                                                                                                                                                               1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1040 TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1025 CACTATATTTCCGCCAGAAACGCTÁCGCATGGCÁCGCGGGGCÁAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        920 TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG 1755
                                                                                                                                                                                                                                                                                                                                                                                             TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG 1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TIGIGITGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAC
                                              AAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCCGGCGTTTGCCCCAG 1935
                                                                                                                                                                                                                                              ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA 1815
                                                                                                                                                                                                                                                                                                                                                                                                                                        GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCTGCCTTTCCTGAACTGGCTTGT 1977
                                                                                                 GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG
                                                                                                                                               GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                                                                                                                                                             CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                                                                                                                                            GTCACGAAGCAAAAGTTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGATTTCGAGGCTTTCGGGGATACTGAGGTTGGGGATACGGCCGAGTTTCGTCC-TATTAC 1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGGTTTGGTCCAGTTTTT 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCAGAAGCACGGCAGCTTTGGCCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGTTGATGAGATCCGTAGTTTTGGGGCCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                 1917
                                                                                                                                                                                                                                                                                                                                                                                             1743
                                                                                                                                                                                             1857
                                                                                                                                                                                                                                                                                              1803
                                                                                                                                                                                                                                                                                                                                                                                                                                              1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
US-08-008-216-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
```

S

밁

S

음 성

₽

밁

 **유** 

δ

음 성 음 성

뭐

중 음 성

δ 멼 S В 5 8 δ 밁 Ś 밁 S 밁 Ş 밁 δ 밁 S

```
Sequence 19, Application Patent No. 5366887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: DNA
MYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Agroba
STRAIN: STRAIN A
IMMEDIATE SOURCE:
                                                              FEATURE:
NAME/KEY:
LOCATION:
OTHER INFORMATION: /label= ORF4SUBSEQUENCE FEATURE:

NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 21126 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                          NAME/KEY: misc feature LOCATION: complement (937... OTHER INFORMATION: /label=FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Barnhorst, Marnie W.
REGISTRATION NUMBER: 36,740
REFERENCE/DOCKET NUMBER: P1020US1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 92101-4297
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 40.
STREET: San Diego
CITY: San Diego
CTATE: California
                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: complement (2649)
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                 LIBRARY: CONT
                                                                                                                    OTHER INFORMATION:
                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 25-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1936 CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EE: GRAY, CARY, AMES & FRYE 401 B Street, Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                   : Agrobacterium rhizogenes
STRAIN A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (619)
                                                                                                                                                                                                                                                                                                                                                CONVOLVULUS ARVENSIS PLANT CELLS
                                                                                                                                        misc_feature
3726..4799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   236-1048
                                                                                                                      /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 06/725,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08008216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/008,216
                                                                                                                      ORF3SUBSEQUENCE
                                                                                                                                                                                        ..3458)
ORF2SUBSEQUENCE
                                                                                                                                                                                                                                                           .2262)
ORF1SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1973
```

```
밁
                                                            ક
                                                                                                    밁
                                                                                                                                   Ś
                                                                                                                                                                      밁
                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: /label= ORF17SUBSEQUENC; FEATURE:
NAME/KEY: misc_feature
LOCATION: complement (19031..19390)
OTHER INFORMATION: /label= ORF18SUBSEQUENC
US-08-008-216-19
                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 623; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE: misc feature
LOCATION: 12466..13002
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: complement (4607..4918)
OTHER INFORMATION: /label= ORFSSU
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: complement (6576..6830)
OTHER INFORMATION: /label= ORF98U
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
LOCATION: complement (17737..18189)
OTHER INFORMATION: /label= ORF16SUBSEQUENC
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: complement (16517..17545)
OTHER INFORMATION: /label= ORF15SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_feature
LOCATION: 13723..14319
OTHER INFORMATION: /label= ORF13SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: complement (10509..11282)
OTHER INFORMATION: /label= ORF11SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: complement (5071
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature LOCATION: 6609..8888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                             7273 TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                                                          683 GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG 859
                                  GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA
                                                                   GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG 802
                                                                                                        GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       misc feature
complement (18177..18743)
RMATION: /label= ORF17SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
15659..16210
RMATION: /label= ORF14SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
9748..10044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
5143..6216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10044
                                                                                                                                                                                                                                                                6.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (5071..5643)
label= ORF7SUBSEQUENCE
                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                               Score 136.4; DB 1;
Pred. No. 4.8e-36;
0; Mismatches 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORFSSUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORF12SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORF10SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORF9SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORF8SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORF6SUBSEQUENCE
                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                Length 21126
                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                               Gaps
                                                                                                                                           742
                                                                                                                                                                            7332
                                                                                                                                                                                                                682
                                  7452
                                                                                                        7392
                                                                                                                                                                                                                                               4
                                                                                                                        밁
                                                                                                                                                                                          밁
                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                δ
                                                 В
                                                                                  S
                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                         8172
                                                     8466
                                                                                                                                                                                                                                                                   8292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1336 GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7573
1876 AAAGAGCGATTATGTCTGCTGCGGGGACGCAATTTCGAGATCTTTCCCGGGCGTTTGCCCAG 1935
                                                                                                                                                                                                                                                                                                      1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1396 ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7453 CCGTTGATGAGATCCGTAGTTTTGGGGCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                            1516 AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1456 GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACTATATTTCCGCCAGAAACGCTÁCGCATGGCÁCGCGGGGCÁAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                        TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCGTGGCCGAAATGGGGCGATGCGATTCCTCCTGCATTCTGCTTGTTTTTCTTCC
                                                                                                                                                    ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA 1815
                                                                                                                                                                                                GTCACGAAGCAAAAGTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                       ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                   TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                  GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                       CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                     GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG
                                                                                      GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                                                                                          CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                             AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTTCCTTGTGCCGGCAACGACCACACAG
                                                                                                                                                                                                                                                                                                                                                                            1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1039
                                                                                                                            8465
                                                                                                                                                                                                8411
                                                                                                                                                                                                                                    1755
                                                                                                                                                                                                                                                                       8351
                                                                                                                                                                                                                                                                                                        1695
                                                                                                                                                                                                                                                                                                                                         8291
                                                                                                                                                                                                                                                                                                                                                                                                              8231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7512
```

밁 á 밁

US-08-459-569-19

APPLICANT:

COUNTRY:

```
Sequence 19, Appl: Patent No. 554350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
ATTORNEY/AGENT INFORMATION:
NAME: PRIOR MATERIAL OF THE PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NEW PRIOR NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (619) 699-270
TELEFAX: (619) 236-1048
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: complement (937..2;
OTHER INFORMATION: /label= OFFATURE;
NAME/KEY: misc feature
LOCATION: complement (2649...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN: STRÀIN A4
IMMEDIATE SOURCE:
LIBRARY: CONVOLVULUS ARVENSIS PLANT CELLS
CLONE: CLONE 7
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYPOTHETICAL: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 699-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGI. DN
MOLECULE TYPE: DN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Tepfer, David A.
TITLE OF INVENTION: Ri T-DNA Promoters
                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                         NAME/KEY: misc feature
LOCATION: 3726..4799
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Barnhorst, Marnie W. REGISTRATION NUMBER: 36,74 REFERENCE/DOCKET NUMBER: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/0 FILING DATE: 02-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 21126 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8586 CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT 8623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8526 AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCTGCTTCCTGAACTGGCTTGT 8585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92101-4297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08459569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : Agrobacterium rhizogenes
STRAIN A4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: GRAY, CARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Slightom,
misc feature complement (4041..4400)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                   lement (2649..3458)
DN: /label= ORF2SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARY, AMES & FRYE
reet, Suite 1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jerry L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/459,569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36,740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P1020US1
                                                                                            ORF3SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                             ORF1SUBSEQUENCE
                                                                                         멼
                                                                                                                                                Ś
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-459-569-19
                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 623; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: complement (10509..11282)
OTHER INFORMATION: /label= ORF11SUB-FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: misc_feature
LOCATION: 6609.8888
LOCATION: /label= ORF8SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
NAME/KEY: misc_feature
LOCATION: complement (16517..17545)
OTHER INFORMATION: /label= ORF15SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REATURE:
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
NAME/KEY: misc feature
LOCATION: complement (17737...18189)
OTHER INFORMATION: /label= ORF16SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: complement (19031..19390)
OTHER INFORMATION: /label= ORF18SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: 12466..13002
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: complement (18177..18743)
OTHER INFORMATION: /label= ORF17SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: 15659..16210
OTHER INFORMATION: /label= ORF14SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature
LOCATION: 13723..14319
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: 9748..10044
OTHER INFORMATION: /label= ORF10SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
LOCATION: complement (5071..5643)
COTHER INFORMATION: /label= ORF7SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: complement (6576. OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 5143..62
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature LOCATION: 5143..6216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: complement OTHER INFORMATION: /:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
                                                                                                                                                                                                                   7273
743 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG
                                                                                                                                                                                                                                                                             623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG
                                                                                                                                                                                                                   TTGACCTGCGGTACGACTATCAGGTTTTCCTCCAGGAGTGCGATGCCCATGATGGTGTGG
                                                                                            GGCATTATCCGGAAGGCGCACCACTACCTAGTGTTGCCATCGTAGGAGGCGGGCTGTCTG
                                                                                                                                                      GCTTCTTTCCGGAGGATGTTCCTAAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCG
                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                      6.0%; Score 136.4; DB 1; 45.9%; Pred. No. 4.8e-36; tive 0; Mismatches 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= ORF6SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= ORF4SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (4607..4918)
label= ORF5SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (6576..6830)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORF9SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORF13SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORF12SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORF11SUBSEQUENC
                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                   Length 21126
                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                                                                                                                                                      Gaps
```

NAME/KEY:

7392 802

7332 742

682

ORGANISM:

유 성

S

유

밁

```
7933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1160
     1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1516 AAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCACA 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1100 TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1040 TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGTTTTCATGAGCGAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7992 AACGTGTTGTTTTCAACGATCCTGGACTGGATTATCAATGGCTACGAGGAGGACCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7633 CACTATATTTCCGCCAGAAACGCTACGCATGGCACGCGGGGCAAGCTCCGCCGGGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    980 ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCACCGAAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGATAAGTTTAGAATTCCGTCCAGCCTTCGTTTCCTTGTGCCGGCAACGACCACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTTGTTGCTGCCACAGAACTACTTGGCGCTGGCGTCAAGGAAATCACTCTTTTCGATA 7452
                                                                                             ATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAAGGTCTA
                                                                                                                                                                                                                   ATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGGG
                                                                                                                                                                                                                                                                          TACAATATCGAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG
                                                                                                                                                                                                                                                                                                                                                                             TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTCTATTGGTGGGGTTCAACTTTTGCAGGCTCTGATGCGCATTGAAATATTCCAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGTCGAGATCTTCAGCTGTGGTAATTCGAGTCCTGGTGGCAAGGCATGGCAAACACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGT----AAACATGGAGTTTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTCAGAAGCACGGCAGCTTTGGCTCCGAGAGTTCGGAAAATTCACTTTCCATGCCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGACTGATGGCTCCGATGGATATCTCTTTCATGTTGAAAGAGCGTCGTCGTGATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCAGCGGGTACATGTCGGATGGAAGACACTACTCTACCAAGGGTGTGAACGGAATGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCGGCACAGTCGACACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCATTCTGCTTGTTTTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTTGATGAGATCCGTAGTTTTGGGGCCATCGCCGATGCCAAACGGCGACGCTCACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAGTGATCGTGTTGGAGGCAA---GCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG
GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                         CTTGTCCGTGAGCTGTGTTGCATTGACATCGAATCG-----CCAGCTGGAGAGGGCCTT
                                                                                                                                                                  GTCACGAAGCAAAAGTTTTTGGGTTAACTCCGGCATCCCAGCAGTGATATGGACCGATGGG
                                                                                                                                                                                                                                                                                                                           GCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGATTTCGAGGCTTTCGGGATACTGAGGTTGGGATACGGCCGAGTTTCGTCC-TATTAC
                                                         8465
                                                                                                             1815
                                                                                                                                                                                                                                                                                                                           1695
                                                                                                                                                                                                                                                                                                                                                                               8291
                                                                                                                                                                                                                                                                                                                                                                                                                                 1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7512
                                                                                                                                                                  8411
                                                                                                                                                                                                                                                                          8351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          859
                                                                                                                                                                                                                      1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1159
```

ર્

8 8 8 8 8 8 8 8

GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG

8525

δ

밁

S 밁 S 밁 δ 吊 र् 뭐 δ 밁 δ 밁 ફ 밁 á 밁 Ś

용

```
RESULT 8
US-08-458-831-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PATENT NO. 582866
GENERAL INFORMATION:
APPLICANT: Slightom, Jerry L.
APPLICANT: Tepfer, David A.
TITLE OF INVENTION: R1 T-DNA Promoters
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (619) 236-1048 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                       OKGANISM: Agrobacterium STRAIN: STRAIN A4 IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/008,216
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: US 06/725,368
FILING DATE: 22-APR-1985
                                                  NAME/KEY: misc_feature
LOCATION: complement (2649..3458)
OTHER INFORMATION: /label= ORF2SU
FEATURE:
                                                                                                                                                                                                                                                                                  HYPOTHETICAL: NO ORIGINAL SOURCE: ORGANISM: Agrob
                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 699-2700
                                                                                                                        FEATURE
                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                             LIBRARY:
CLONE: (
              NAME/KEY:
                                                                                                                                       NAME/KEY: misc_feature
LOCATION: complement (937.
OTHER INFORMATION: /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Barnhorst, Marnie W. REGISTRATION NUMBER: 36,740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: San Diego
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 21126 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: P1020US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCCGGCGTTTGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT 8623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCTGCCTTTCCTGAACTGGCTTGT 8585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
                                                                                                                                                                                                               : CONVOLVULUS ARVENSIS PLANT CELLS CLONE 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/08458831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401 B Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                misc_feature
3726..4799
                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRAY, CARY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-JUN-1995
                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
              .4799
/label= ORF3SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/458,831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , AMES & FRYE
Suite 1700
                                                                                                                                                                                                                                                                                      rhizogenes
                                                                      ORF2SUBSEQUENCE
                                                                                                                                         .2262)
ORF1SUBSEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1935
```

Query Match  6.0%; Score 136.4; DB 1; Length 21126; Best Local Similarity 45.9%; Pred. No. 4.8e-36; Matches 623; Conservative 0; Mismatches 721; Indels 14; Gaps 4;  Oy  623 TCGACTTGCTCTACGACTGCAGACCGTTTTTTGACCAATGTTCCGATAGTGGACGGATCG 682		NAME/KEY: misc feat LOCATION: complemen OTHER INFORMATION: EATURE: NAME/KEY: misc feat LOCATION: complemen	16517 bel=	; FEATURE: ; NAME/KEY: misc_feature ; LOCATION: 1565916210 ; OTHER INFORMATION: /label= ORF14SUBSEQUENC	; FEALURE: ; NAME/KEY: misc_feature ; LOCATION: 1372314319 ; OTHER INFORMATION: /label= ORF13SUBSEQUENC	; FRANCE: ; NAME/KRY: misc feature ; LOCATION: 1246613002 ; OTHER INFORMATION: /label= ORF12SUBSEQUENC	; FAALORE: ; NAME/KRY: misc feature ; NAME/KRY: misc feature ; LOCATION: complement (1050911282) ; COTHER INFORMATION: /label= ORF11SUBSEQUENC ; FRATURE:	; NAME/KEY: misc feature ; LOCATION: 97481004 ; COTHER INFORMATION: /label= ORF10SUBSEQUENC	; NAME/KRY: misc feature ; NAME/KRY: misc feature ; LOCATION: complement (65766830) ; OTHER INFORMATION: /label= ORF9SUBSEQUENCE	; MAME/KEY: misc feature ; LOCATION: 6609.8888 ; OTHER INFORMATION: /label= ORF8SUBSEQUENCE	NAME/KEY: misc feature  LOCATION: complement (50715643)  OTHER INFORMATION: /label= ORF7SUBSEQUENCE	NAME/KEY: misc feature  LOCATION: 51436216  OTHER INFORMATION: /label= ORP6SUBSEQUENCE  FRATURE:	; NAME/KEY: misc_feature ; LOCATION: complement (46074918) ; OTHER INFORMATION: /label= ORF5SUBSEQUENCE ; FRATURE:	; FEATURE: ; NAME/KEY: misc feature ; LOCATION: complement (40414400) ; OTHER INFORMATION: /label= ORF4SUBSEQUENCE ; FEATURE:
D Q D Q D 4	S	, 00 B	Qy Db	P Q	B &	Db Qy	Qy db	Db Qy	Db Q	Db Qy	Qy dd	Qy Ob	D Qy	Qy Db
TACAATATCGAAACCCGCCGTCGGAAACTCGTCTGCCGCTGTCAATTCAGCACTCTTCATG  ATGACTGAACGAAAATTCTGGGTTAGACCCATATCCTCCGTCTTTGTGTCCTCATGACGGG  ATGACTGAACGAAAATTCTGGGTTAGACCCATATCCTCCCGTCTTTGTGTCCTCATGGACGGG  ATCGCAAAAGGTATTTTGGGTTAACTCCGGGATCCCAGCAGTGATATGGACCGATGGG  ATCGCAAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA  ATCGCAAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCTA  ATCGCAAAAAGCAGTGTATTGCCTTGACATTGACTACGAATCGCCAGCTGGAGAGGGGCCTT  CTTGTCCGTGAGCTGTTTGCCATTGACATCGAATCGCCAGCTGGAGAGGGCCTT	8172 AGATTGAAGGTATGCTTGAAACACGGTCATTCGCGTGTTTTTGACCAGGTCATCATTGGC 8231  1576 TCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCAG 1635	GTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAGACA	ATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGGT	1336 GAAAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAGAAAATCAGCGG 1395 	1276 ATGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTT 1335	1220 TAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTTTCCTC 1275	1160 CTCATGACTCCTGGCAAATTTGGCTGAACCGTTTCGGGAGGGA	1100 TTGTGTTGGCTTCGCCTGTCGCTATTACTCAGGCCTTGAAATCAGGACACATTAGGTGGG 1159	1040 TCCATCGCGTTTACAACGGTTGGCGTGCGTTCTTGAAGGACGGCTTTTCATGAGCGAGATA 1099	980 ACTTGGTCTACCAAGGCGTCCAATACATGTGGAAAGCCGGGCAGCTGCCCCGAAGCTGT 1039	920 TCGAGCGTTACGGCCTGTCTTCGATGAGGCCGTTCCCAAATCCCCGGCACAGTCGACACTT 979	860 TCGTGGCCGAAATGGGGGCGATGCGATTTCCTCCTGCTGCTTGCT	803 CAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTTTCAGGGACGCTCCTAGTG 859	743 GACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAGACGATGTTACAATATATGAAG 802 

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
US-09-103-840A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-230-388-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
  ŝ
                                                                                                                                                                                                                 APPLICANT: FLISCHMAN, Robert D.
APPLICANT: WHITE, Owen R.
APPLICANT: WRASER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION UMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION: APPLICANT: Iwamoto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/09103840A Patent No. 6294328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 2
LENGTH: 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/09230388 Patent No. 6291644
                                                                                                                                                                            SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/230,388
CURRENT FILING DATE: 1999-01-22
PRIOR APPLICATION NUMBER: PCT/JP98/02261
PRIOR FILING DATE: 1998-05-22
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Scomber japonicus
-09-230-388-2
-09-103-840A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Iwamoto, Mitsunori; Jung, Sang-Kee
TITLE OF INVENTION: NOVEL PROTEIN, ITS GENE, REAGENTS
TITLE OF INVENTION: APAPTOSIS, AND ANTICANCER AGENTS
                                                                                                                                                                                                    SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE:
                  OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various positions throughout the sequence
OTHER INFORMATION: represent a, t, c or g
                                                                                                                                 LENGTH: 4403765
TYPE: DNA
                                                                                     FEATURE:
                                                                                                       ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.7%;
Local Similarity 66.1%;
tes 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          773 CTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGG 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182 ATGTGGTTATAGTCGGAGCTGGCATGGCCGGACTGACGGCGGCCAAGTTACTGCAAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    713 AAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGT 1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGGACGGTGCTTGGAATTGGTCAGGGAGCTTGCTGCCTGTCCTTTCCTGAACTGGCTTGT 8585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCGTTTTTCACTATGCTTTGGATGACTATCTATCCCGGCCGATCGAGCATCATGACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAAA 1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGG----ACACACGGTAACCATATTGGAGGCTAATGATCGTGTTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGGTCCCAGTCAACGAAGACTACGAACGATATGT 8623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANAGAGCGATTATGTCTGCTGCGGGACGCAATTTCCGAGATCTTTCCCGGCGTTTGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4703/0F214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 38.6; DB 3; Length 1
Pred. No. 0.017;
0; Mismatches 34; Indels
                                                                                                                                                                                                                                                                                                                                     FOR STRAIN ANALYSIS IN MYCOBACTERIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3; Length 1575;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REAGENTS FOR INDUCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲,
```

```
APPLICANT: FIEISCHMAN, Robert D.
APPLICANT: WHITE, Owen R.
APPLICANT: WRASER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-2007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn Ver: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-103-840A-1
                                                                                                                                                                                                                                                                                                                                                                                                          US-08-665-037-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: 1
                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/08665037
Patent No. 5895813
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09103840A Patent No. 6294328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                      APPLICANT: Seedorf,
APPLICANT: Ullrich,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Mycobacterium tuberculosis OTHER INFORMATION: H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
   ZIP: 90071-2066

COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
COMPUTER: OF THE COMPATIBLE DOS 5.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 4411529
                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                       STREET: 633 West FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               993926 AGCGCAGGGATTACTGATGTCTGCATCTATGAAAAGGCCGACGATGTTGGCGGAACG 993982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     993866 CCGACGGTTGCCGTGGTCGGAGCGGTATGTCCGGAATGTGCGTCGCAATTACGTTGCTG 993925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   993867 CCGACGGTTGCCGTGGTCGGAGCGGGTATGTCCGGAATGTGCGTCGCAATTACGTTGCTG 993926
OPERATING SYSTEM:
                                                                                                        COUNTRY: U.S.A.
                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709 CCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             769 CATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709 CCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67;
                                                                                                                                              Los Angeles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCGCAGGGATTACTGATGTCTGCATCTATGAAAAGGCCGACGATGTTGGCCGGAACG 993983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                                                             California
                                                                                                                                                                                  E: Lyon & Lyon
633 West Fifth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                           Ullrich,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                Seedorf, Klaus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.3%;
                                                                                                                                                                                                                                                          DISORDERS
                                                                                                                                                                                                                                                                           DIAGNOSIS AND TREATMENT OF TKA-1 RELATED
                                                                                                                                                                                                                                                                                                               Axel
 IBM P.C.
                                                                                                                                                                                    Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 37; DB 3; Pred. No. 24;
 DOS 5.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOR STRAIN ANALYSIS IN MYCOBACTERIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4411529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4403765;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/

FILING DATE:

June 13, 1996

US/08/665,037

```
RESULT 13
US-08-666-067-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-665-037-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/08666067 Patent No. 5922842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 1.6%;
Best Local Similarity 62.0%;
Matches 57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: ITITLE OF INVENTION: ITITLE OF INVENTION: ITITLE OF SEQUENCES:
           APPLICATION NUMBER: US/08/666, FILING DATE: June 13, 1996
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/005,421
FILING DATE: October 13, 1995
                                                                                                                     COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. SOFTWARE: Word Perfect 5.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERACE/DOCKET NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 220
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEFAX: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: October 13, 1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
TTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1642 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                          ZIP: 90071-2066
                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Warburg, Richard REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1874 AAAAAGAGCGATTATGTCTGCTGCGGGACGCA 1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1814 TAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   788 CAGATGAACACTTCAAGCGGCTTCGGGTCACA 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            728 TGGTGGCCAGCATCAAGGCACGGGAGGACGAGGCCCGGCTGCTGGTCGTGGACCCCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seedorf, Klaus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Coding Sequence 97...1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                          DIAGNOSIS AND TREATMENT OF TKA-1 RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Axel
                                                                                                                                                                                                                                                                                                                                                                                                                         DISORDERS
                                                                                                     US/08/666,067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 36; DB 2;
Pred. No. 0.15;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220/156
                                                                                                                                                           DOS 5.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
; FEATURE:
; NAME/KEY:
; LOCATION:
US-08-666-067-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
US-08-732-870-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08732870 Patent No. 5945523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity Matches 57; Conserv.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/666,037
FILING DATE: June 13, 1996
APPLICATION NUMBER: 08/666,067
FILING DATE: June 13, 1996
APPLICATION NUMBER: 60/005,167
FILING DATE: October 13, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Ullric
                                         FILING DATE: October 13, 1995
APPLICATION NUMBER: 60/005,421
FILING DATE: October 13, 1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                           SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 22
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/732,870 FILING DATE: October 15, 1996 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                   COMPUTER: IBM CONTROL OPERATING SYSTEM:
            NAME: Warburg, Richa
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1814 TAGTGCTCATCAGTTATACATGGGAGGACGACTCCCCACAAGCTGTTGGCGGTCCCCGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1874 AAAAAGAGCGATTATGTCTGCTGCGGGACGCA 1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Warburg, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTGGCCAGCATCAAGGCACGGAGGACGACGACCCCGGCTGCTGGTCGTGGACCCCGAGA 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1642 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ullrich, Axel
Seedorf, Luitgard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coding Sequence 97...1446
                                                                                                                                                                                                                                                                                                                              IBM Compatible
                       Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DIAGNOSIS AND TREATMENT OF TKA-1 RELATED DISORDERS
                                                                                                                                                                                                                                                                                                               IBM P.C. DOS 5.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 36; DB 2
Pred. No. 0.15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220/157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1873
```

```
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Hershberger, Charles
APPLICANT: Payson, Robert
TITLE OF INVENTION: Ketoreductase Gene and Protein from Yeast
TITLE OF INVENTION: Ketoreductase Gene and Protein from Yeast
TITLE OF INVENTION NUMBER: US/09/415,277C
CURRENT APPLICATION NUMBER: US/09/415,277C
CURRENT FILING DATE: 1999-10-08
PRIOR APPLICATION NUMBER: US 09/182,985
PRIOR FILING DATE: 1998-10-30
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGOTH: 1032
TYPE: DNA
ORGANISM: S. Cerevisiae
FEATURE:
PAME/KEY: CDS
LOCATION: (1)...(1032)
COTHER INFORMATION:
US-09-415-277C-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-09-415-277C-4/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                         F
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-732-870-1
Search completed: November 23, 2003, 21:26:57 Job time : 147.658 secs
                                                                                                                      र्
                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1642 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 1.6%; Score 36; DB 2; Length 1642; Best Local Similarity 62.0%; Pred. No. 0.15; Matches 57; Conservative 0; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/09415277C Patent No. 6531308
                                                                                                                                                                                                                                                                                                                                                                               Query Match 1.6%;
Best Local Similarity 53.7%;
                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: Coding Sequence LOCATION: 97...1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1874 AAAAAGGCGATTATGTCTGCTGCGGGACGCA 1905
                                                                                                                                                                                                                                                                                                  1498 ATTCAGAAGGAAAAAAAAAAAAAAAAAAAGATAAGGCTTAAGAGCGGGGATATCTGAACTTTAT 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1814 TAGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACA 1873
                                                                                                                      1618 GATACCAATATTTTTC 1633
                                                                                                                                                                                                                          1558 GATAAGGTGGTGGTCACATCTGGACTCGCAAATATCCCAACTCAGGCATTGCCTGACATGC 1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        788 CAGATGAACACTTCAAGCGGCTTCGGGTCACA 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                728 TGGTGGCCAGCATCAAGGCACGGGAGGACGAGGCCCGGCTGCTGGTCGTCGACCCCGAGA 787
                                                                                                                                                                              564 GTGATCTTCATTCTCTTTTGTGAACTCCCAGGCAGCCTTTTCAGCAAACTTCTTGGATGC 505
                                                                                                                                                                                                                                                                         624 ÁTCGAAÁAGTTGÁGGÁCCAÁAÁAAGÁGÁGÁGÁGÁGGTTGÁCTGTTAGTTTGAATTTGAT
                                                                                        AAAGTAAGCATTTATC 489
                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                            Score 35.2; DB 4; Length 1032; Pred. No. 0.2; 0; Mismatches 63; Indels 0
                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                             565
                                                                                                                                                                                                                                                                                                                                                                 0
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB DB
                                                    Score
 51.6
49.8
44.8
44.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 2000000000
                                                    Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTITY_NUC
                                                                                                                                                   18:
19:
20:
21:
22:
23:
24:
25:
26:
28:
                                                                                                                                                                                                                                                                                10:
11:
12:
13:
14:
15:
16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22781392 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-434-837-10
2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        November 23, 2003, 21:01:51 ; Search time 4831.41 Seconds
 2.2
2.2
1.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atgtcagcttcacctctcct.....actaccgcagtagaaattag 2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyright
                                                                                                                                                                                                                                                                                                                       gb_est1: *
gb_est2: *
gb_htc: *
gb_est3: *
                                                                                                                                                                                                                                                                                                                                                                                                                       em_esthum:*
em_estin:*
em_estmu:*
                                                                                                                                                em_gss_mus:*
em_gss_pro:*
em_gss_rod:*
em_gss_phg:*
em_gss_vrl:*
gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                        em gss hum:*
em gss inv:*
em gss pln:*
em gss vrt:*
em gss fun:*
em gss mam:*
                                                                                                                                                                                                                                                                                         gb_est5:*
em_estfun:*
em_estom:*
                                                                                                                                                                                                                                                                                                                                                                             em_htc: *
                                                                                                                                                                                                                                                                                                                                                                                       em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                   em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                               em_estov: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_estba: *
                                                   Length DB
 1201
618
564
481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
  12
12
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12152238056 residues
BX381961
AU239500
BJ123611
BJ101485
                                                     ij
                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
11409.196 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45562784
BX381961 BX381961
AU239500 AU239500
BJ123611 BJ123611
BJ101485 BJ101485
                                                    Description
                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                    RESULT 1
BX381961
                     FEATURES
                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                            FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ი
                                                                                                                                                                                                                                                                                                                                                                                                   ი
                                                                                                                                                                                                                                                                                                                                                                                                                                   0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ი ი
           source
```

	110000	۲				ĉ
וונים האפשפה שוה שונים	2752265	3	J	. 7	D	л
BI627861 RH69326.	BI627861	12	N	1.7	φ.	4
BI566474 RH3	BI566474	12	σ	1.7	9	ັພ
AI457056 LD37279.5	AI457056	9	S	1.7	9.	ົວ
BI368223 RE54155.	BI368223	12	0		9	Ä
CA614930 wrl	CA614930	14	0		9	ö
BY467572 BY467572	BY467572	13	w		٩	9
BI611075 RH1	BI611075	12	$\mathbf{H}$	•	9	æ
BJ305833 BJ3058 <b>3</b> 3	BJ305833	12	0		9	7
BI296551 UI-R-CV2	BI296551	12	g		9	9
BG378762 UI-J	BG378762	10	$\vdash$	1.7	39.4	ភ
BI300778 UI-R-CV2	BI300778	12	σ		9	4
AA943462 EST1	AA943462	9	ហ		9	ພັ
AI101650 EST210939	AI101650	9	8		9	ົວ
AG176243 Pan	AG176243	29	7			=
CA934750 MTUSTS.P	CA934750	14	7		0	ō
AI102326 EST211615	AI102326	ø	-		0	ĕ
BU821300 UB2:	BU821300	ŭ	μ		0	8
AL415995 T7 end o	CNS06ULH	29	9		0	7
BX376097 BX376097	BX376097	13	0	•	42	6
CA926583 MTU	CA926583	14	σ		4	ຜັ
BU348455 60352352	BU348455	13	S			4
BJ117453 BJ1:	BJ117453	12	u		۶	ü
AU109666 AU10	AU109666	ø	u		4	ίŏ
BJ101110 BJ1	BJ101110	12	œ		ï	ï
BX381961 BX3	BX381961	13	0		Ü	õ
BJ103250 BJ1	ВJ103250	12	មា		4	<u>ن</u>
ВJ124022 ВJ1	BJ124022	12	w		4.	80
BJ117235 BJ1	BJ117235	12	$\vdash$		4.	7
AU204573 AU20	AU204573	9	0		4.	þ
BJ101145 BJ1	BJ101145	12	0		4.	'n
AU207635 AU20	AU207635	φ	φ		4.	4
BJ121635 BJ1:	вл121635	12	œ		4.	w
BJ121613 BJ121613	ВJ121613	12	œ			N
CB401025 OST	CB401025	14	σ		4.	<u>;                                    </u>
AU201678 AU20	AU201678	9	4		4.	0
BJ120847 BJ1	BJ120847	12	N		4.	9
AU203802 AU20	AU203802	9	$\vdash$		4.	œ
BJ1085	BJ108542	12	511	1.9	44.2	7
AU199996 AU19	AU199996	9	0	1.9	44.2	თ
BJ103567 BJ1	ВJ103567	12	æ	1.9	44.2	Ŋ

## BX381961 1201 bp mRNA linear EST 08-MAY-200. BX381961 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiens cDNA clone CSODI072YF05 3-PRIME, mRNA sequence. BX381961.1 GI:30453007

EST 08-MAY-2003

ALIGNMENTS

BX381961

Homo sapiens (human)

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

2 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

3 (bases 1 to 1201)

1 (bases 1 to 1201)

4 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

3 (bases 1 to 1201)

4 (bases 1 to 1201)

4 (bases 1 to 1201)

4 (bases 1 to 1201)

4 (bases 1 to 1201)

5 (bases 1 to 1201)

4 (bases 1 to 1201)

5 (bases 1 to 1201)

5 (bases 1 to 1201)

6 (bases 1 to 1201)

6 (bases 1 to 1201)

6 (bases 1 to 1201)

8 (bases 1 to 1201)

8 (bases 1 to 1201)

8 (bases 1 to 1201)

9 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

1 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (bases 1 to 1201)

2 (base

/organism="Homo sapiens"

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                  1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1217 GGATAGAGAGGATCTTTCTGGGCACACATCCTCCTGGTGGTAAACATGGAGTTTTCCTCA 1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
BKKVCVKKKKKKKKKKKKKKKCKKCCNMKKBCKKCKKKKBKKKKGGGG 1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MKBMMMCKMCMBKKOMMMMMMKMKMMMMNKOKAMMKKDNMMMMMCAMMCMMMKKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGACTGAACGAAAATTCTGGTTAGACCATATCCTCCCGTCTTGTGTCCTCATGGACGG 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KTNKKKKINIAKKINITINIKMININKINININIMININCINCIKKKINIKTIMINIMININININKKININ 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CNKMMNAMNNKKMNKMMMNKONMMNCKTNNNNNNNKONNNNKKKKKKKKKNNNNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGTGCCCTGAAGGAATCTCAGAACTTCCACGTCGGATCGCATCTGAAGTGGTTAACGG 1454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NNYMNN'N CNEMINIKAKKANININ KAMIKAMMIKANIN CININ KMCKAMIMMIN KAMIMIN KA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANAGCGGGTTTATTGAGATCCTCCGCTTGGTCATCAACGGATATGAAG--AAAATCAGCG 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NNNKKKKCMNKNKKKMMNKKNMNKKKKKKKNNNNNCNANNMMNNKNKKKNNKNNNTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGATTGGGACCTATTCAAGCTAATGGGAATAGGATCTGGCGGGGTTTGGTCCAGTTTTTG
                                                                                                                                                                                                                                                                                                                                                GCACCTATTTCCTGCCTGCGCTGATTACGACCAAAATGTTATTCAACATGATTGGCTTAC 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MMMMCAMKVMMMBAMWMBAMVVMMMNNMMMMCKKMVMKKKKMCKKKBMSKKMMMNKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAAGAGCGATTATGTCTGCTGCGGGACGCAATTTCGAGATCTTTCCCGGCGTTTGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CVMKMKMKMCCKKVMMBKMCAKKKKMCMCVKKVMCMCDBKMCMCKKKBMKKVCCKKMCMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTGCTCATCAGTTATACATGGGAGGACGACTCCCACAAGCTGTTGGCGGTCCCCGACAA 1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MYMBKKNCMMKKMCCMMKKKKHKKNMMKKMMCKKBMMCKKNKMNKMNKMVKKKKAMMNBK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCGCAAAAGCAGTGTATTGCCTGGACTATGAGTCGCAGGATCCGAATGGTAAAGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NNKNNNNNNNNNNKKMKMSKCKKKKMCCKMCCMCKKKKKMBKGKMVCMCKMMKNKKCMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCACCAGTGAACCAAGCGGTTGATAACAGCCATATGACAGGATCGTCAAAACTCTTCCT 1694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTGGACTCGCAAATATCCAACTCAGGCATTGCCTGACATGCGATACCAATATTTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAAATAAAGATAAGGCTTAAGAGCGGGATATCTGAACTTTATGATAAGGTGGTGGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGTCTGTGAGCCAGCGCATATGCCATGTTCAAGTCAGGGCGATTCAGAAGGAAAAAGAC 1514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGNANKKAAANNNKKKACNNCNCNCMAAKCCNNACKANNNKKKMKACNANNNNNKCKMMM
                                                                                                              AGACGAGAATGCCGGGGGAGCTTTCAAACTCAACCGGCGTGGTGAGG 2041
                                                                                                                                                                                                                                  VCKMBBMCMSKGGCMMCGCMCKGCVGCMNSCCMMBGSKGCCKKKMBKCMMCCMCMCBCMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative 288; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="PLACENTA COT 25-NORMALIZED"
/clone_Tib="Homo sapiens PLACENTO COT 25-NORMALIZED"
/note="Jet strand cDNA was primed with a NotI-oligo(dT)
/note="Jet strand cDNA was primed with a NotI oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMNSPORT 6 vector. Library was normalized."
a 191 c 115 g 55 t 745 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODI072YF05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 51.6; DB Pred. No. 0.0025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
```

밁

ঠ

밁 ş 5 밁 S

밁

á

밁 S

밁

ð

밁 Ş 밁 ঠ

á 밁 Ś 밁 ঠ 밁 δ 문 δ 밁

```
RESULT:3
BJ123611
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
AU239500
LOCUS
                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                     뭉
                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                        782
                                                                                                                                                                                                                                                                                                                                                                                                                      722
                                                                                                                                                                                                                                                                                                                                                                               82
                BJ123611
BJ123611.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           81;
                                                                         BJ123611 square EST 23-JAN BJ123611 unpublished oligo-capped cDNA library, C. elegans Ll Caenorhabditis elegans cDNA clone ykl302a06 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mseki@rtc.riken.go.jp
An Arabidopsis full-length CDNA library was constructed essentially
An Arabidopsis full-length CDNA library was constructed essentially
as reported previously (Seki et al., 1998).cDNA cleaved with BamHI
and XhoI was ligated to modified Lambda FLC-1 vector (Carninci et
al., submitted for publication) digested with BamHI and SalI. This
clone is in a modified pBluescript vector. Please visit our web
site (http://www.gsc.riken.go.jp/e/plant/index _e.html) for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seki,M., Narusaka,M., Ishida,J., Kamiya,A., Satou,M., Nakajima,M., Akiyama,K., Enju,A., Oono,Y., Sakural,T., Carninci,P., Kawai,J., Itoh,M., Ishii,Y., Arakawa,T., Shibata,K., Shinagawa,A., Muramatsu,M., Hayashizaki,Y. and Shinozaki,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RIKEN Genomic Sciences Center
3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074,
Tel: 81-298-36-4359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana (thale Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AU239500 G18 bp mRNA linear EST 01-APR-2002
AU239500 RAFL19 Arabidopsis thaliana cDNA clone RAFL19-89-D06 5',
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: 81-298-36-9060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plant Functional Genomics Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Motoaki Seki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Large scale analysis of Arabidopsis full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU239500.1 GI:19878669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                      ACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAGCTTTGGTCACATGCTT
                                                                                                                                                                                                                                                              TCAGGGACGCTCC
                                                                                                                                                                                                                                                                                                                                                                               TCATTGGCGCTGGAATCTCCGGAATATCGGCGGCGAAGATTCTCGTCGAGAACGGAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                    TCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTGCTTCATGCTGGGGTAG
                                                                                                                                                                                                                       TCGGTGACGTGCC
                                                                                                                                                                                                                                                                                                 AAGATGTATTGATACTGGAAGCGACGGATCGGATCGGAGGAAGAATACATAAACAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 618)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="RAFL19"
/note="Site_1: BamHI;
143 c 148 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="mixture
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Arabidopsis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.2%;
                                                                                                                                                                                                                                                            854
                                                                                                                                                                                                                     214
                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 49.8; DB 9
Pred. No. 0.0072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cress)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of silique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                           52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SalI; Subtra
3 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and flower"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Subtraction
                                                                                                                     EST 23-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                  L1 stage
                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 4
BJ101485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
               FEATURES
                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                     CCESSION
                                                                                                                                                                    TITLE
                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                           Contact: Tadasu Shin-i
Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, v.
Tel: 81-559-81-6856
                                                                                                                                                                              Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 481)
Kohara,Y., Shin-i,T., Thierry-Mieg,J., Thierry-Mieg,D., Suzuki,Y. and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                 BJ101485
BJ101485 unpublished oligo-capped
Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
            Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                   BJ101485.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center For Genetic Resource Information National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 564)
Kohara, Y., Shin-i, T.,
and Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans
                                                                                                                                                                A complementary view of the C.elegans
                                                                                                                                                                                                                                                                                  Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                     BJ101485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCANA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                170
                                               81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.0%;
larity 56.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
/clone_lib="unpublished oligo-capped cDNA library,
elegans_L1 stage"
a 123 c 115 g 151 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:6239"
/clone="yk1302a06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   strain="N2"
                                                                                                                                                                                                                                                                                                                     GI:18244155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 44.8; DI
Pred. No. 0.2;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        388
                                                                                                                                                                                                                                                                                                                                                   mRNA linea:
1 cDNA library, (
2 yk1027a04 5', (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63;
                                                                            Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                               linear EST 18-JAN
rary, C. elegans L1
4 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                    EST 18-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suzuki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                   stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             765
```

```
RESULT 5
BJ103567
LOCUS
                                                                                                                                                                                                                                                                                                                                                                            JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE CO
                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
 Query Match
Best Local S
Matches 82
                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNT
                                                                                                                                                                                                                                                 source
Local Similarity
nes 82; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              384 ATTCATGCCATACCGTACAAGGATG 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264 AAACCGTCTATAGCAATCGTCGGCGGCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
. Phahditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82;
                                                                                                                                                                                                                                                                                                           Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BJ103567
486 bp mRNA linear EST 18-JAN
BJ103567 unpublished oligo-capped cDNA library, C. elegans L1
Caenorhabditis elegans cDNA clone yk1051f01 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                         Kohara,Y., Shin-i,T.,
and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BJ103567
BJ103567.1 GI:18246237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                 Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                          Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                           A complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCCGAAAGTGGCGGTCATTGGCGCCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGATCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135
                                                                               137
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                 tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ø
                                                                            /clone lib="unpublished oligo-capped cDNA library, elegans L1 stage" a 104 c 114 g 130 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="L1"
/clone_lib="unpublished oligo-capped cDNA library,
elegans_L1 stage"
107 c 104 g 135 t
                                                                                                                      /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                      /db_xref="taxon:6239"
/clone="yk1051f01"
                                                                                                                                                                                                   strain="N2"
                                                                                                                                                                                                                  /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex="hermaphrodite"
/tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="yk1027a04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Caenorhabditis elegans"
/mol_type="mRNA"
                                                                                                                                                                                                                                  organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:6239"
                                                                                                                                                                                                                                                    .486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.9%;
                56.6%;
                                1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
 Score 44.2; D
Pred. No. 0.29
0; Mismatches
   0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 44.2;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           850
                                                                                                                                                                                                                                                                                                                              411-8540, Japan
                . 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                              DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 18-JAN-2002
elegans L1 stage
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥,
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    765
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
RESULT 7
BJ108542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
AU199996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B. 8
                                                                                                                                                   밁
                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                              밁
                                                                                                                    5
                                                                                                                                                                                                                                        ঠ
   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                    Cocus
                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       193
                                                                                                                                                      265 ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                  205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                              706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
   BJ108542
BJ108542
                                                                                                                                                                                                                                                                         ch 1.9%;
1 Similarity 56.6%;
82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AU199996
AU199996 unpublished oligo-capped cDNA library, stage L2
Caenorhabditis elegans cDNA clone yk774a07 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genome Biology Lab.
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411,
Tel: 81-559-81-6854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 508)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kohara, Y., Shin-i, T., Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AU199996.1
                                                                                                                                                                            CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                  AAACCGTCTATAGCAATCGTCGGCGGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTCATGCCATACCGTACAAGGATG 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                              ATTCATGCCATACCGTACAAGGATG 349
                                                                                                                        CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                      a
511 bp
unpublished oligo-capped
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Caenorhabditis
/mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="L2"
                                                                                                                                                                                                                                                                                                                                                                                                              /sex="Hermaphrodite"
/tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="yk774a07"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:14827576
                                                                                                                                                                                                                                                                                                                                                                             lone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                            _xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                      109 c
                                                                                                                                                                                                                                                                          Score 44.2; DB Pred. No. 0.3; 0; Mismatches
                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                    116 g
                                                                                                                                                                                                                                                                                                                                                      135 t
mRNA linea
cDNA library,
                                                                                                                                                                                                                                                                                                        DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans"
                                                                                                                                                                                                                                                                             63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                        Length
 linear
rary, C.
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                           508;
   elegans
   EST 30-MAY-2003
elegans L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 17-JUL-2001
                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rhabditoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Suzuki, Y
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                        324
                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                  264
                                                                                                                                                                                                                                                765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     765
                                                                                                                                                                                                                                                                            0
```

```
RESULT 8
AU203802
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                  COMMENT
                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 82
                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                     329
                                                                                                                                                                                                                                                                                                                                                                                                    826 CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209 AAACCGTCTATAGCAATCGTCGGCGGCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST. Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea Eukaryota; Metazoa; Nematoda; Caenorhabditis.
                                                                                                                       Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea
. Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caenorhabditis elegans
BJ108542
BJ108542.2 GI:31243973
EST.
                                                                                                                                                                                                                                                 AU203802 unpublished oligo-capped cDNA library, stage Ll Caenorhabditis elegans cDNA clone yk825ell 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
On Jan 2002 this sequence version replaced
On Jan 23, 2002 this sequence version replaced
Contact: Tadasu Shin-i
Center For Genetic Resource Information
On Jul 17, 2001 this sequence version replaced gi:14834726 Contact: Yuji Kohara
Genome Biology Lab.
                                                                                and Sugano, S.
                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kohara,Y., Shin-i,T., Thierry-Mieg,J., Thierry-Mieg,D.,
                                                 Unpublished
                                                                  A complementary view
                                                                                                   Kohara, Y., Shin-i, T.,
                                                                                                                 Rhabditidae; Peloderinae;
                                                                                                                                                                                   Caenorhabditis elegans
                                                                                                                                                                                                                    AU203802.2 GI:31231885
                                                                                                                                                                                                                                       AU203802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A complementary view of the C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                     ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    elegans
a 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Caenorhabditis
/mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:6239"
/clone="yk1109b04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                    of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 44.2; D
Pred. No. 0.3;
                                                                                                 Thierry-Mieg,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA clone yk1109b04 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                  C.elegans
                                                                                                                                                                                                                                                                                                                                                                     353
                                                                                                                                                                                                                                                                                                                                                                                                    850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genome
                                                                                                     Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gi:18268570
                                                                                                                                                                                                                                                                                       EST 30-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                     Suzuki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suzuki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
BJ120847
                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭐
                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                        /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      350 ATTCATGCCATACCGTACAAGGATG 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    230 AAACCGTCTATAGCAATCGTCGGCGCCGGTATTTCCGGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82;
                                                                                                                                                                                    Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                BJ120847

S29 bp mRNA linear EST 23-JAN BJ120847 unpublished oligo-capped cDNA library, C. elegans L1 Caenorhabditis elegans cDNA clone yk1261a07 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                             Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                            Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                        and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                        Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 81-559-81-6854
Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                       A complementary view of the C.elegans
                                                                                                                                                                                                                                                                                                                    Kohara,Y., Shin-i,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                        BJ120847.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCCGAAAGTGGCGGTCATTGGCGCCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                (bases 1 to 529)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                          tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
/clone="yk1261a07"
/sex="hermaphrodite"
/tissue="whole animal"
/tissue="L1"
/dev_stage="L1"
/clone_llb="unpublished_oligo-capped_elegans_L1 stage"
                                                                                                    /mol_type="mRNA"
/strain="N2"
                                                                                                                               organism="Caenorhabditis elegans"
                                                                                   db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:6239"
/clone="yk825e11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sex="Hermaphrodite"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                        GI:18280980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 44.2; DI
Pred. No. 0.3;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٥,
                                                                                                                                                                                                                                                                                                                  Thierry-Mieg,J., Thierry-Mieg,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114 g
                                                                                                                                                                                                               411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                elegans"
                                                                                                                                                                                                                                                                                       genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear EST 23-JAN-2002 rary, C. elegans L1 stage
              cDNA library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                  Suzuki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AU201678
LOCUS
                                         밁
             S
                                                                   á
                                                                                                  밁
                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                           Matches
                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                          source
              826
                                           289
                                                                      766
                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       766
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      706 AAGCCGAAAGTGGCGGTCATTGGCGCCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST.
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
Eukaryota; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genome Biology Lab.
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 41
Tel: 81-559-81-6854
Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AU201678
AU201678 unpublished oligo-capped Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                      Email: ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 540)
Kohara, Y., Shin-i, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AU201678.1
                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGAACTTGGAATTGACGATTTTGATATCTÄCGAAGGTCTCGÄCCGGATCGGAGGCAGA 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                        CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                         AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                           157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154
                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                           b
                                                                                                                                                                                                                                                                                   /tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                                                                                                                                                               /db_xref="taxon:6239"
/clone="yk797d07"
/sex="Hermaphrodite"
                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                         organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                   clone_lib="unpublished oligo-capped
                                                                                                                                                                                                                                                                                                                                                                                                          . 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:14830776
                                                                                                                                                                                                                                           117 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                              1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                0;
                                                                                                                                                                Score 44.2; DE Pred. No. 0.3; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                        119 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                  850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44.2;
No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   411,
                                                                                                                                                                                                                                           147 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA linear EST 17-JI
cDNA library, stage L1
yk797d07 5', mRNA sequence
                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                63;
                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thierry-Mieg, D.,
                                                                                                                                                                                           Length
                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                     cDNA library, stage
                                                                                                                                                                                              540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 17-JUL-2001
                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rhabditoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Suzuki, Y.
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                              348
                                                                           825
                                                                                                                                   765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252
                                                                                                         288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 765
                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

EST 23-JAN-2002 legans L1 stage

Rhabditoidea

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
CB401025
                                                                                    8
                                                                                                                            밁
                                                                                                                                                             ঠ
                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
RESULT 12
                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCESSION
                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                     189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        349
                                                                                                                                                              766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

1 (bases 1 to 560)

Reboul, J., Vaglio, P., Rual, J.F., Lamesch, P., Martinez, M., Armstrong, C.M., Li, S., Jacotot, L., Bertin, N., Janky, R., Moore, T., Hudson, J.R., Hartley, J.L., Brasch, M.A., Vandenhaute, J., Boulton, S., Endress, G.A., Jenna, S., Chevet, E., Papasotiropoulos, V., Tolias, P.P., Ptacek, J., Snyder, M., Huang, R., Chance, M.R., Lee, H., Doucette-Stamm, L., Hill, D.E. and Vidal, M.R., Lee, H., C. elegans ORFsome version 1.1: experimental verification of the genome annotation and resource for proteome-scale protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: Marc_Vidal@dfci.harvard.edu
Sequence tag of Gateway entry clones. The primers used were
designed on the predicted protein encoding ORF. C. elegans (
cloning project : Contact david_hill@dfci.harvard.edu or
marc_vidal@dfci.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dana Farber Cancer Institute
1 Jimmy Fund Way Smith 858, F
Tel: 617 632 5180
Fax: 617 632 5739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CB401025
OSTF186F11_1 AD-wrmcDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CB401025.1 GI:30742752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Vidal M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nat. Genet.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CB401025
                                                                                                                                                                                                                                                                                               Similarity
                                                                                        CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                     AAACCGTCTATAGCAATCGTCGGCGCCGGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                          AAGCCGAAAGTGGCGGTCATTGGCGCCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTCATGCCATACCGTACAAGGATG 373
                                                     ATTCATGCCATACCGTACAAGGATG 213
                                                                                                                              ATTGÄACTTGGAATTGÄCGATTTTGATÄTCTÄCGÄÄGGTCTCGÄCCGGATCGGÄGGCÄGA 188
                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vidal Laboratory
                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                   /note="The AD-wrmcDNA library was generated with poly(A)+ RNA isolated from both hermaphrodite and male N2 worms of all larval stages, embryos, adults and dauers and the subsequent generation of cDNAs by poly(A) priming. The CDNAs were cloned into pPC86"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="Hermaphrodite and male"
/tissue_type="whole animal"
/dev_stage="mixed stage"
/clone_lib="AD-wrmcDNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Caenorhabditis elegans"
|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'strain="N2"
                                                                                                                                                                                                                                                                                             1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (2003) In
                                                                                                                                                                                                                                                                            <u>0</u>
                                                                                                                                                                                                                                                                                             Score 44.2;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                    122 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis
                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BOSTON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                DB 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ¥
                                                                                                                                                                                                                                                                          63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A linear :
elegans cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02115,
                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         elegans ORFeome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 15-MAY-2003
                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
                                                                                                                                                                  825
                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                            0
                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                             RESULT 13
BJ121635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                        REFERENCE
                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
 COMMENT
                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     210 AAACCGTCTATAGCAATCGTCGGCGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG 825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
                                                                                                                                                                                                                                       BJ121635 suppublished oligo-capped cDNA library, C. elegans Caenorhabditis elegans cDNA clone yk1278h02 5', mRNA sequer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BJ121613 bp BJ121613 unpublished oligo-capped Caenorhabditis elegans cDNA clone
               A complementary view of Unpublished
                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditidae; Peloderinae; Caenorhabditis.

[] (bases 1 to 586)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans
Caenorhabditis elegans
                                               and Sugano, S.
                                                                                                                                             Caenorhabditis elegans
                                                                                                                                                                                    EST
                                                                                                                                                                                                   BJ121635
BJ121635.1 GI:18281772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 584)
Kohara, Y., Shin-i, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BJ121613
BJ121613.1
                                                                      Kohara, Y., Shin-i, T.,
                                                                                                                                                                Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complementary view of the
                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans
a 122
Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="L1"
/clone_lib="unp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="whole animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="hermaphrodite"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:6239"
/clone="yk1278f01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:18281750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lib="unpublished oligo-capped cDNA library, C.
;L1 stage"
; c 130 g 154 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                      Thierry-Mieg, J., Thierry-Mieg, D.,
                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44.2; DB
No. 0.31;
                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA linear EST 23-JAN CDNA library, C. elegans Ll yk1278f01 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
orary, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
```

0

Gaps

269 765 0

EST 23-JAN-2002

L1 stage

Rhabditoidea

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
AU207635
                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                      HITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82;
                                                                                                                                                                                                    Genome Biology Lab.
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 4
                                                                                                                                                                                                                                                                                                                                                        Caenorhabditis elegans
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
                                                                                                                                                                                                                                                                                                                                                                                                                                               AU207635

AU207635 unpublished oligo-capped Caenorhabditis elegans cDNA clone
                                                                                                                                                                                                                                                       Contact: Yuji Kohara
                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                 Rhabditidae; Peloderinae; 1 (bases 1 to 597)
Kohara, Y., Shin-i, T., Thier; and Sugano, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center For Genetic Resource Information
National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                Tel: 81-559-81-6854
                                                                                                                                                                                                                                                                                    A complementary view
                                                                                                                                                                                                                                                                                                                                                                                                                        AU207635.1 GI:14841711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTGGTCACATGCTTTCAGGGACG 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                 ykohara@lab.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 വ
                                                                                      /organism="Caenorhabditis
/mol_type="mRNA"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone lib="unpublished oligo-capped elegans L1 stage" 123 c 130 g 154 t
               /sex="Hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
                                                          /db_xref="taxon:6239"
/clone="yk1004b11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="hermaphrodite"
/tissue_type="whole |
/dev_stage="L1"
clone_lib="unpublished oligo-capped cDNA library, stage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:6239"
/clone="yk1278h02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Caenorhabditis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.9%;
                                                                                                                                                                                                                                                                                    ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 44.2; DB Pred. No. 0.31; 0; Mismatches
                                                                                                                                                                                                                                                                                                               Thierry-Mieg, J.,
                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                   C.elegans genome
                                                                                                                                                                                                                                                                                                                                              Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           354
                                                                                                                                                                                                          411,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          animal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA linear EST 17-JUI cDNA library, stage L1 yk1004b11 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BB
                                                                                                                   elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63 :
                                                                                                                                                                                                                                                                                                                Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   586;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 17-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                           Rhabditoidea
                                                                                                                                                                                                                                                                                                               Suzuki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                         밁
                                                   Ś
                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
BJ101145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
S
                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                      Query Match
Best Local S
Matches 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                          COUNT
                                                                                                                                                                                                                                                                                                                                                              source
 826
                           289
                                                      766
                                                                                                            706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      826 CTTTGGTCACATGCTTTCAGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     706 AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          766 CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                                                                                       82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST.
Caenorhabditis elegans
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BJ101145
BJ101145 unpublished oligo-capped cDNA library, C. elegans L1
Caenorhabditis elegans cDNA clone yk1022g05 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                               Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kohara, Y., Shin-i, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BJ101145
BJ101145.1 GI:18243815
                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A complementary view of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Sugano,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rhabditidae; Peloderinae; (bases 1 to 603)
                           ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA 348
 CTTTGGTCACATGCTTTCAGGGACG 850
                                              CTTCATGCTGGGGTAGACGATGTTACAATATATGAAGCAAGTGATCGTGTTGGAGGCAAG
                                                                               AAACCGTCTATAGCAATCGTCGGCGCCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                         AAGCCGAAAGTGGCGGTCATTGGCGCTGGCATTTCCGGGACTCGTGGTGGCAAACGAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTGAACTTGGAATTGACGATTTTGATATCTACGAAGGTCTCGACCGGATCGGAGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANACCGTCTATAGCAATCGTCGGCGCGCGGTATTTCCGGACTATCGACCGCGCGTCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTCATGCCATACCGTACAAGGATG
                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179
                                                                                                                                    1.9%;
ilarity 56.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                           tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                          þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   വ
                                                                                                                                                                                                       elegans L1 stage"
130 c 131 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              딛
                                                                                                                                                                                                                                                 /sex="hermaphrodite"
/tissue_type="whole animal"
/dev_stage="L1"
                                                                                                                                                                                                                                                                                                                                /organism="Caenorhabditis
/mol_type="mRNA"
                                                                                                                                                                                                                                    /clone_lib="unpublished oligo-capped
                                                                                                                                                                                                                                                                                           /db_xref="taxon:6239"
/clone="yk1022g05"
                                                                                                                                                                                                                                                                                                                      strain="N2"
                                                                                                                                                                                                                                                                                                                                                                . 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ი
                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                 Score 44.2;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thierry-Mieg, J., Thierry-Mieg, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                131
                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44.2; DB
No. 0.31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                                                                                                                 411-8540, Japan
                                                                                                                                                                                                          162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                   . 31;
                                                                                                                                                                                                          r
                                                                                                                                                                DB 12;
                                                                                                                                                                                                                                                                                                                                                elegans"
                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 597;
                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                       Indels
                                                                                                                                                                                                                                    cDNA library,
                                                                                                                                                                 603;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans L1 stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 18-JAN-2002
                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                     ი
                                                     825
                                                                               288
                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

망

Search completed: November 24, 2003, 04:01:39 Job time: 4835.41 secs